/11 cont./

*532 on the nose slightly in relief. The tattooing is cut in as a small circle. The apron is reproduced in bast. The necklaces on two are made of bast, on the third of cotton. All three wear cuffs of cotton thread, which is wound around the arm between two raised rolls of wax. Likewise, all three wear ear rods. The shapes are thus reproduced fairly proportionately. The fashioning of the chin, the arms and legs, hands and feet is particularly good. Gentle reminders of the schematic representation of the clay figures are found in the formation of the fat buttocks and the stomach plate.

Other human figures are a rider and a gourd figure.

The rider (Fig. 67 /see p. 51 /) is represented very true to life. On the horse the head and tail /12/ are depicted, the legs supplied by long sticks. The rider has long cylindrical arms and legs; hands and feet are lacking; the head is offset. The lower body and legs are wrapped with raw cotton as trousers. At his belt he carries a sword and revolver, in both arms the gun ready to fire, all fashioned in wax.

The gourd figure (Fig. 68 /see p. 51 /), which represents a youth, is formed in most peculiar fashion. The torso consists [824] of a small round gourd, on the top of which a well-fashioned wax head is placed. On the head are attached a topknot, a braid wound with red thread, ear rosettes, and necklaces of cotton thread. /Figs. 69 and 70 appear here./ 1/2

*532 I would like to add here the reproduction of masked dancers.
535 Masked dances resting on an animistic foundation take place
[122] among the Karajá particularly in the rainy season (from October to April). Dance masks are used for this, and for the most part they represent animals. These masks are either plaited out of
[245 palm leaves and conceal the whole form of the dancer, or they
824 consist of a cane cylinder with a brightly colored mosaic of
837] feathers stuck on, which is put on the head. The face is concealed by a covering attached to the lower edge of the cylinder; a leaf covering is tied around the shoulders and hips, so that of the dancer only the feet and the hands with the dance rattle are

2/1 [see p. 21 -- Analyst]

/9 cont./

142 The bridge is narrow, markedly convex with a somewhat pendulous tip. The alae are usually somewhat drawn up, so that the round nostrils seem to be directed toward the front.

In size the women stand significantly behind the men, but are just as well proportioned. Their figures tend to be somewhat full in their youth. Almost all the younger individuals have uncommonly delicate hands and feet and a perfect form of the bust, but, like [853] all Indian women, they lose their charms very early; in particular the long breast-feeding causes excessive lengthening of the [481] breasts. In the case of older women, the weak development of the lower extremities and the waddling gait of the inwardly turned feet make an unpleasant impression.

The real skin-color of the Karaya is difficult to determine at first glance. Staying on the sun-scorched praias changes the bright yellow-brown of their complexions, which one can still confirm only under their large cotton cuffs and knee-bands, into a dark copper- 302 brown. Even this is not easy to see in the case of many individuals because of the /10/ body painting used to the broadest extent (Fig. 1 /see p. 17 /). People painted black or red from head to foot are not rare. Others combine the black or red color into patterns which almost give the impression of European clothing. Black line-drawings on the face and extremities are the most popular.

302 Used for body painting are:

386 1. Urucú (uarerĭŏ). Paste made from the red berries of Bixa [824] orellana.

• [824] 2. The blue-black dye (beðẽna) obtained from the seeds of the genipa (Genipa brasiliensis).

3. Soot. This is either simply scraped from the cooking pots and rubbed into the face or, mixed with genipa, it serves for diffuse painting of the whole body.

302 The line-decoration is put on with the fingers or little wooden 413 sticks, the diffuse coloring with a rag.

/10 cont./

302 The bristly or wavy black hair of both sexes is cut off straight above the eyebrows and hangs down in back over the neck. Dandies [301] wear a part about three centimeters wide up to the crown /Fig. 1 appears here/, let the short crown-hair stick up like a brush, and with cotton strings tie the part hanging down in back into a braid, at the roots of which the men sometimes tie a decoration of blue arara or black mutum /curassow/ feathers (ušiktamaru).

301 In the pierced ear-lobes both sexes wear sticks of cane 15-20 [304] centimeters long for everyday.

The plug in the lower lip (anʒōŏ) is used only by the men. It [814] consists of the light, flaky wood of the piuva tree and is either cut obliquely with a short point or runs out into a long, thin lamina hanging down on the chest (Fig. 2, b /see p. 18/).

Boys primarily wear, instead of this, small T-shaped pieces of shell (idžža) (Fig. 2, d /see p. 18/).

The most precious lip ornament, which is worn only on festive occasions, but otherwise is kept carefully wrapped in cotton, is a long, heavy, stone plug (manuterĕ) of hyaline or rose-colored quartz, the T-shaped end of which is stuck through the lower lip while the conical button hangs down (Fig. 2, a /see p. 18/). Of the four specimens in the collection the largest is 17.5 centimeters long.

301 /11/ These lip stones, of which only a few have reached 439 European collections, are not made by the Karaya themselves, but are bartered from the Tapirapé, the Tupi people on the like-[135] named left tributary of the Araguaia. The mountain chains of the left riverbank, such as the Serra dos Cayapos, are rich in this material. A Kayapo stone plug acquired in S. Maria is shorter and runs out to a tapered, blunt end (Fig. 2, c /see p. 18/).

304 Tattooing is limited to the tribal badge which both sexes 619 wear on their cheeks: a blue ring 10-15 millimeters in diameter (auʒamanurĕ) just under the lower edge of the orbit.

515 On the whole the Karaya are distinguished by scrupulous care of the body. They bathe several times a day. Their hair is 302 always carefully combed. All the hair on the face and body is [412] plucked out. Shears are now commonly used for hair cutting, [231] whereas formerly piranha teeth were used for this.

/11 cont./

291 Clothing. The men go about completely naked, but tie the foreskin over the penis glans with a black cotton thread, like the end of a sausage (Pl. I /see p. 103/, 1). The women wear the nantŏ, a kind of sash made of the bast of the jangada tree (Apeiba jangada). /Fig. 2 appears here./ Softened in water and beaten and dried with flat stones, it acquires a high degree of pliability and a gleaming white, almost cloth-like appearance, very similar to the Polynesian tapa cloth made in the same way. A piece one span wide and 1 1/2 meters long is placed around the hips, both ends drawn be-

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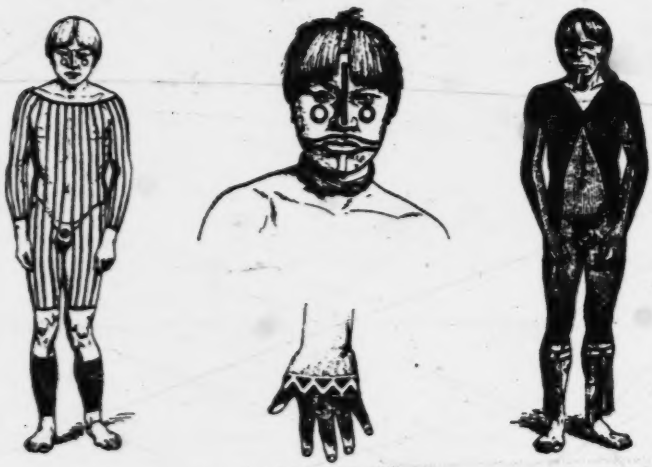

Fig. 1. Body painting.

291 tween the legs from back to front and knotted below the navel, so that the ends hang down to the feet. When sitting down, the ends are thrown back under the seat (Pl. I /see p. 103/, 2).

This primitive costume is supplemented by various arm and leg bands which represent a special tribal peculiarity.

854 Soon after birth the lower arm and lower leg of the child are
291 wrapped with heavy black cotton cords (aʒoñrubĕ), while a band five centimeters wide and likewise black is put around the body (uaitakaui) (Pl. VII /see p. 109/, 3 and 4).

/12 cont./

286 177 They most probably owe their mat to the civilized Brazilians. Insofar as the latter use hammocks at all, they make them out of [283] cotton. Now Pinto da Fonseca says (op. cit., p. 387) that the Karaya used cotton only for making fish nets and bow strings, but were unacquainted with the art of weaving. He himself made them a weaving apparatus and instructed the women in this skill.

[184] This would agree with the fact that still today the Yavahē of Bananal Island, among whom Pinto undertook his first civilizing attempts, are designated as the most skillful weavers. The uncommonly firm, taffeta-like, woven "rede" in the collection is supposed to be Yavahē work. A visit among them would definitively settle this interesting question.

293 [285] [324] Also to be mentioned here as a noteworthy elaborate piece belonging to the Karaya are the eyeshades (åodi) plaited out of buguassú palm leaves, with which they protect themselves from the blinding reflected sunlight while walking over the sandbanks (Pl. VIII /see p. 110/, 10). They have not arrived at the construction of protective apparatus of the type of the Eskimo snow-goggles, but they prize European dark glasses.

[197] The adding on to the eyeshade to make a complete top-hat (taă) is probably to be traced back to European influence. There were two specimens of it in all.

Settlements, Houses, and Domestic Animals.

621 361 The Karaya do not live in small troops of two or three families, as the forest Indians of Amazonas and the rude hunting nomads of the coastal region do, but always in larger communities. Only the southernmost Karayahi are forced by the lack of means of subsistence to divide up somewhat more. In the vicinity of S. José during the dry season one continually meets small bands of eight to ten persons. The farther one comes downstream, the more populous their camps become. Some of them may number at least 150-200 inhabitants.

342 [824] The Karayahi huts erected on the sandbanks usually consist of large buriti-fiber mats stretched over pole frames, standing about without any order, like gypsy tents (Pl. III /see p.105 /, 2).

/12 cont./

342 184 Only rarely does one see among them the characteristic solid house-construction of the Šambioa and then only in smaller 351 364 dimensions, without any particular care in the construction. Since all the scraps are simply strewn on the ground, the refuse gradually [136] becomes unbearable. The vermin multiplying in large numbers, especially the sand fleas, finally force them to abandon the place. 342 In the rainy season the Karayahi move into stronger, buriti-leaf [361] covered, open ranchos on the high bank, which do not in other respects differ in form from those customary among the Brazilian population.

/13/ The "summer huts" of the Šambioa are very much more [184] carefully and neatly built. Here the greater diligence, industriousness, and the comfortable well-being of the free son of the wilderness are manifest, in contrast to his "tame" tribal brother vegetating in oppressive conditions and dependent on civilization. [361] Not in disorder, but in long rows, forming real streets, these houses with their impeccable cleanliness make an uncommonly friendly and comfortable impression (Pl. IV /see p. 106/, 1, and Pl. V /see p. 107/).

621 In the first Šambioa village we counted 60 huts, in the second 30, in the third 45, and in the fourth 90, each of which is inhabited by one or two families.

The individual villages are distinguished by special names.

342 The basic form of the house is rectangular; the narrow side [335] with the door faces the street. The frame consists of three or four flexible poles on each side carried over forked supports and held together with those on the opposite side by means of cipos, thus /Fig. 3 appears here/ forming a boat-like, arched roof, which is further supported by some vertical poles set in the ground in the long direction (Fig. 3 /see p. 22 /). These, as well as the forked supports, are connected with one another by as many strong horizontal poles as are necessary. Thin laths are placed lengthwise [824] and parallel to one another on the outside over the ribs of the roof and serve as supports for the strong pinnate leaves of the uaguassú palm (Attalea spectabilis), which, in several layers, form a fairly waterproof roof. Their leaf pinnae are also entwined with one another into a very solid plaited work. These plaitings serve

/15 cont./

241 Cara tubers /Dioscorea/ are grown in large quantity, excellent quality, and in various species. Most commonly one sees the huge egg-shaped pé d'anta (Cara brasiliensis) with a white cut-surface, as well as a smaller one with an almost violet cut-surface.

222 [242] The wild food plants and fruits which the river forests and camp-woods supply constitute a desirable change. These are primarily palm fruits, such as the nuts of the uaguassú, the pineapple-like fruits of the buriti (Mauritia vinifera), and various small species of coconut; furthermore, the wild acaju tree, the jaboticaba, the pitanga /Surinam cherry/ the oily piquia (Caryocar brasiliense), various Bromeliaceae, and, finally, the finest fruit of the campos, the mangaba (Hancornia speciosa). One sees the latter, however, much more rarely than in the Xingu villages. The tree does not seem to be planted as it is there.

[262] [239] It is noteworthy that the orange, which flourishes extremely well here, is not cultivated, although the Indians esteem it most highly. Only rarely do they undertake week-long journeys to the Brazilian settlements to trade for these fruits. A principal goal of such excursions is the site of the old, now abandoned mission and military post Chambioas, just above the rapids of S. Miguel, where rather large stands of this noble tree have maintained themselves. Cacao, too, was formerly obtained from there.

Still to be mentioned is the honey of the countless species of wild bees, the collecting of which presents no difficulties since the animals are entirely stingless. The black wax, which [237] is stored in large, round, inch-thick disks, is used in Indian industry as a glue.

249 The only luxury item of the Karaya is tobacco (koti). It is a Nicotiniana, but not N. tabacum, of a mild quality. The dried leaves are stored (see p. 40) in large rectangular packages plaited out of palm-leaf strips and are pulverized between the 276 hands for use. /16/ The fruit capsule of the jequitiba tree 824 (Hymenaea sp.), filed smooth on the outside, serves as a pipe

/16 cont./

(arikoko). One specimen in the collection is carved out of wood in its natural form (Fig. 4 and Pl. I /see p. 103/, 1).

Preparation of food. Directly in front of the house door is found the cooking place, surrounded by low pole frames on which the squeezed manioc is dried. Large earthen pots stand on stones or clay supports over the fire. The ground around is littered with scraps. These heaps are the breeding places of annoying gray flies (the so-called mosca da aldeia), which sting badly and, when they get out of hand, necessitate abandoning the place.

Untiringly the women are busy throughout the day with dragging in the field produce and firewood, the preparation of manioc, pounding maize, opening palm nuts, and the careful supervision of all the culinary processes, in which the Indian housewife, despite the simplicity of the materials, knows how to achieve a relatively great diversity.

Fig. 4. Tobacco pipe (1/4).

Fire is still made wholly in the original way by means of the drill (hädă). It consists of two sticks. The thicker one, wood of the urucú plant, is fixed on the ground after a shallow cavity provided with a deep cut at the side is made near one end. Then the point of the second, thinner stick of taquara /Chusquea sp./ is set in this and is twirled between the palms with strong pressure until a hollow is formed at this point, out of which the glowing dust flows through the notch at the side and can be collected. Thus the procedure is precisely the one illustrated and described by Im Thurn (op. cit., p. 258). As in the method used by the Warrau /Warao/, no special tinder is needed. The pulverized wood itself supplies it. To kindle a livelier flame, dry strips of palm leaf are mixed with the easily flammable red resin (tamararu), which is like sealing wax, and then lighted.

/17 cont./

412 Today the primitive tools are limited to those which Nature
239 provides for specific purposes, such as scraping knives of mussel shells, chisel-shaped implements made of rodent teeth, flat stones for pounding bast cloth, the coarse bony tongue of the pirarucú as a rasp, etc.

178 Despite widespread use of foreign tools, the industry of this people has completely retained its national character. Fortunately, among the Karaya, there is still no question of any decline in it such as almost always sets in as a consequence of the introduction of European products, as is well known. Fitness, beauty of form, and care in execution are still characteristic of their work.

501 Canoe construction is on a rather high level, although the method of production is relatively simple. The boats (aunõ) are long narrow dugouts with the front and back parts extending equally far and somewhat sloping at the tips. Given the many shallows of the river this form is the most efficient, since it facilitates the landing and launching of the vessel (Pl. IV /see p. 106 /, 2).

396 The material is the straightest possible trunk of the ipiuba
824 (Tecoma sp.) or jatoba (Hymenaea sp.). Since the forward part is from the lower, the back part from the upper section of the trunk, the canoes are usually somewhat broader in the front than in the back. The hollowing is done with an ax and aided by fire. Since the cavity of the boat is not artificially widened by special manipulations such as Im Thurn describes (op. cit., p. 293), but rather the original diameter of the trunk also determines that of the boat, the canoes are usually disproportionately narrow in proportion to their length and tip over easily. They
501 are smoothed over inside and outside with great care. Arrangements for sitting are not present. There are set in on the other hand, rows of short crossbars, which, fixed a few inches above the bottom, protect any cargo from getting wet.

The oars (nahere, Pl. VIII /see p. 110/, 1-3) are of excellent workmanship. They are 1 1/3 to 1 1/2 meters long, half of which is taken up by the handle provided with a cross-grip. The blade is straight, leaf-shaped, 15-20 centimeters wide, and runs out at the bottom into a lancet-shaped, offset tip. Elegant

/17 cont./ Elegant

501 [531] oars are painted black. The middle third of the blade is covered by a decoration made up of black zigzag lines and dots on a white background (see p. 49).

411 The weapons of the Karaya are still the original ones throughout.

The bows (suahĕtĕ) are of various sizes according to the age and strength of the owner. The longest of the collection measures 220 centimeters, the shortest child's bow 70 centimeters. They [824] consist in part of the wood of the brejauba palm (Astrocaryum sp.) or the so-called pau d'arco (Tecoma sp.). The front side is usually somewhat smoothed down, the ends tapered with thornlike, offset tips (Pl. VI /see p. 108 /, 1).

411 284 [824] /18/ The string (mahūga) and the way it is fastened show certain peculiarities similar to those found among the Guiana tribes. The material is embira bast (Malvaceae sp.), the leaf fiber of a Bromelia (caraguatá) or that of the pati palm (Syagrus botryophora). The length of the string twisted from it exceeds that of the bow by six to eight times. Of a appropriate thickness at one end, it tapers more and more toward the other, finally ending in a thin thread. The strong end is wound around the upper tip of the bow. From there the string goes directly to the lower end and along the front side of the bow upward to about the middle. Then it runs back again and is wound fast around the lower part of the bow with its thinner end. The last, thread-like part hangs down, decorated with a feather tassel.

In order that the wound end does not slip up, it is wound at the place of the curve with a layer of maize leaves which are tied fast with black cotton cords. Sometimes the ends of the bow are also wrapped with thin white threads below the tip. A similar, but looser cotton binding ties the part of the string running on the outside of the bow to the bow wood. This prevents too great a strain on the string. If the upper end of the string breaks, a replacement can easily be brought up by unwinding from below. A break at the lower end is not easily possible because of the counter pressure present there.

/18 cont./

411 The form of the arrows (uehẽ) is very manifold.

The shaft of the arrow consists of two pieces, a lower one of cane and the one inserted in it of wood. The latter bears either a special tip or, sharpened and correspondingly shaped, serves in some way as one itself.

In general the length of the cane shaft amounts to two-thirds of the length of the whole arrow, and that of the wooden shaft one-third.

411 The feathers of the lower cane-end are always placed so 230 that their uppermost tip, wound around itself, lies at the level of the notch. The quill describes a 1/8 to 1/4 turn around the shaft. The heavy arrows, especially those provided with a broad cane tip, usually have a heavier winding of feathers.

Through the twisting of the feather tip, the outer feathers of the quill are sharply bent outward. The inner feathers are cut off short in order to lie closer to the shaft.

In the case of many arrows the lowest piece, which bears the notches and feathering, is separately inserted into the cane shaft. Probably the original arrow end was split here during the cutting or bending the bow and was supplemented by an insert.

411 The feathers are tied with black cotton strings, between 230 which are usually placed small red and yellow decorative feathers. 231 The attached pieces are held together by waimbẽ (Philodendron 284 sp.) bast bands. [531] The feathered part of the cane end often has [824] crossbands touched up with red lacquer (tamararu).

411 The following arrow types are represented in the collection:
[126] 1. War arrows, with point made from the tail-spine of a thornback, 150-180 centimeters long, two-thirds of which makes up the cane shaft. The spine, six to eight centimeters long and supplied on both sides with countless small barbs, is tied to the wooden shaft with thread and wax in such a way that the lower part projects as a long barb. The wooden shaft itself is painted with red lines, wavy lines, and dots (Pl.VI/see p.108 /, 8).

2. War arrows with cane tip cut in the shape of a knife, related to the Bororo arrows in their form. Total length 140-160 centimeters, of which the cane shaft takes up only one-third. On the upper end of the 3/4 centimeter thick wooden shaft made

/19 cont./

411 Of the three specimens the largest has a total length of 72.5 centimeters, of which 14.5 make up the handle (Pl. VI /see p. 108/, 6). Moreover, there is a children's throwing board 38.5 centimeters long.

[824] The arrows thrown (kåura) are 150-180 centimeters long, unfeathered cane pieces made of uba (Gynerium saccharoides) with inserted, 12-20 centimeter long end-knobs of palm wood, which are covered with a thick layer of wax. Thus they should be considered only as sporting equipment. That tradition still knows them as weapons, however, is shown by the legend given on p. 85 (Pl. VI /see p. 108/, 7).

323 Ceramics. The art of making pots, practiced exclusively by the women, is not especially developed. Although the technique leaves little to be desired, the forms are rather simple.

[517] An artistic desire to reproduce natural objects, animal shapes, etc., as among the Xingu tribes, is not expressed in them. Everything is reckoned more in terms of the practical.

As almost everywhere in South America, the vessels are made without a wheel by putting rolls of clay over one other circularly or spirally. By patting with the dampened hand and continuous smoothing with pieces of bone and mussel shell, the pot finally reaches the desired shape and strength.

[113] According to Couto Magelhães (Archiv. do museu nac. Rio, p. 77) the ash of certain vines is mixed with the clay; their silica content makes it more resistant.

According to further information from the above observer, the firing of the pots is done, after superficial drying, in a peculiar manner. A hole is made in the side of an earth termite nest, and it is heated. The vessel is put in, and under it there is made a second opening communicating with the first one, with a fire maintained in it. A third opening at the top serves as a chimney.

415 106 The collection shows the most important, but not the largest types of vessels that occur (Fig. 5 /see p. 38/).

/19 cont./

415 1. The most common form can be described as two truncated cones with their bases touching. A tall model with a narrow opening and a shorter one with a wide opening are in use.

2. Wide open, deep bowls of similar basic form serve as cooking pots.

3. Flat, round plates, perhaps imitated from European forms.

4. Low elliptical double bowls with a partition running lengthwise.

5. Cylindrical pots with bent or projecting rim.

[191] 6. Small bowls (uatiui) with three feet, used especially by children; an analogous form is found in Ecuador.

7. Clay spoons.

The vessels do not have handles; instead bast cords are wound around the neck of the pot or drawn through the edge.

●[824] The gourd bowls (ŭša) (fruit of Crescentia cuyete) also belong among the vessels. They are not found here in the size and diversity of form as among the Xingu /20/ tribes by far. On the other hand, they are much more carefully prepared and dried, and possess incomparably greater durability. They are usually [531] blackened inside and out and provided with engraved decorations (Fig. 6 /see p. 38/ and Fig. 10 /see p. 47 /). Painted gourds, like those of the Xingu tribes, do not occur.

415 In their natural shape, i.e., not cut through and provided
534 with a round opening only at one pole, and also with hanging cords (Pl. VIII /see p. 110 /, 7), they serve as bottles or containers for smaller /Fig. 5 appears here/ objects, such as seeds, decorative feathers, and such things; with a wooden handle and the seeds left inside, or pebbles, they serve as a dance rattle (uärŏ). [531] As such, they are often decorated with bands of feathers hanging down (Pl. X /see p. 112/, 1 and 2). /Fig. 6 appears here./

285 Plaited work, in view of the inexhaustible wealth of plant material which the bounteous nature of South America puts at the disposal of the savage primitive inhabitants, occupies the most prominent place in Indian home industry. Actually it forms the yardstick of the culture of these tribes. The Karaya are second to no other nation in this art, but their works are distinguished

/20 cont./

285 less by decorativeness than by practicality, care in execution, and diversity of form.

● [824] The leaves of the uaguassú and buriti palms serve them for making mats. The diagonally plaited leaf pinnae of the former provide, as was mentioned above, an important material for

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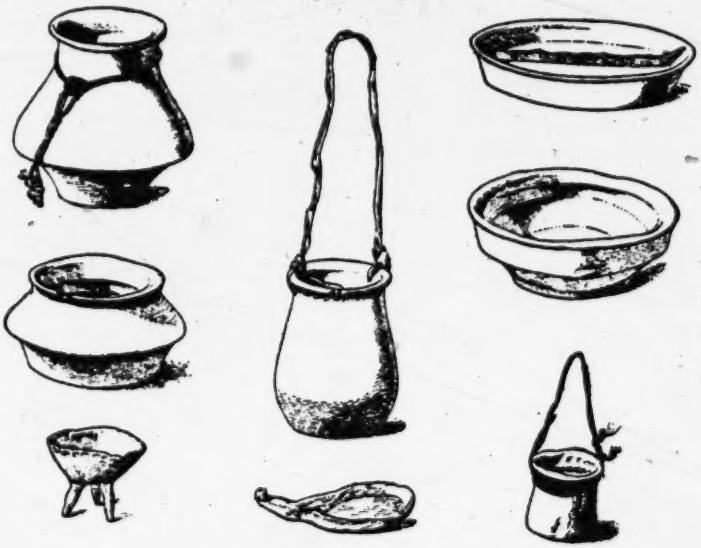


Fig. 5. Types of clay vessels (1/6).

[531]

Fig. 6. Gourd bowl with decorations.

285 house construction. These simple mats are also used for floor covering; because they are so easy to make, they are usually put together at the moment of need.

The true mats (esteiras), which are used as an underlayer while sleeping and as tent roofs, are made from the finely divided fan-leaves of the buriti palm. The tender fibers, split lengthwise, are always stored for use in braidlike plaited skeins.

/21/

285 Long parallel bundles of them are held together by twisted threads running through them in pairs. A single, continuous weft string is drawn through the whole. Where the string bends at the edge of the mat for the next woof, there are alternating loops, by which the plaiting is hung up. The woofs are placed at intervals of about three centimeters. The dimensions of these uncommonly durable, soft, and flexible mats are often very considerable. The two specimens in the collection are fan-shaped, almost twice as wide on one end as on the other. The length of the plaited part of the larger one amounts to 196 centimeters, and an unplaited width of 58 centimeters is left over. The width measures 135 centimeters on top, 234 centimeters on the bottom.

If a Karaya must remain standing for some time on the scorching hot sand of the praias, he protects the soles of his feet with a small mat of similar execution placed under them. The corresponding piece in the collection is plaited with black embira bast in a complementary pattern (Pl. VIII /see p.110 /, 13).

[824] For basket plaiting, besides the palms named, the smaller Mauritia species, carandasinha, split taquara cane, flexible cipos, as well as the so-called arimbamba, various species of vines, split maranta stalks, etc. are also used.

[482] 1. For transporting larger loads huge carrying-baskets (behåra) are made by simply plaiting two uaguassú leaves together. They are laid parallel to each other so that there is an interval of 30-40 centimeters between the ribs. The leaf pinnae, turned toward one another make up the back wall of the basket in diagonal crossing; those lying toward the outside, knotted one under the other on each side, make up the side parts. The bottom is formed by tying together their lower ends. The length of such a basket, supplied with strong carrying cords, can amount to three meters (1).

1. Concerning a quite similar utensil on the Congo, cf. Smithson. Reports, 1877, p. 287, with illustration.

[482] 2. The same palm provides the material for the round carrying-baskets (rorå). The edge consists of the middle rib split

/21 cont./

285 vertical striping. By turning the diagonal splints toward the outside, there arises on each side a diagonal cross-pattern in dark color. All the splints come together at right angles at the bottom.

10. Round shallow baskets (uäriri) made of pliable vines,
[415] whose vertical splints join at the bottom in four groups intersecting at right angles (Pl. VIII /see p. 110 /, 14), serve as sieves.

11. A spherical basket for storing raw cotton has a quite similar plaiting. The vertical strips are of less pliable material (Pl. VIII /see p. 110/, 16).

283 The textile industry of the Karaya is essentially still plaited
[824] work. Primarily natural vegetable materials, the fiber of the buriti and certain Bromeliaceae, as well as the varieties of bast of the Malvaceae (embira and jangada) known for extraordinary cohesion, provide material for threads. Finer threads are made by rubbing the fibers between moistened hands or between hand and thigh. Stronger ones are then twisted out of these in the manner described by Im Thurn, op. cit., p. 284, a method which, moreover, is also practiced by every Brazilian sertanejo /inlander/. The thread and strands thus obtained are, however, used almost
[286] exclusively for twine, cords, and bow strings. To be sure, mesh goods is knitted out of them with long wooden needles, for example, fishing and carrying nets, as well as peculiar, collapsible caps of cotton thread, which are decorated in various ways with feathers (see p.44).

The true weaving material is cotton. The hand spindle (ă-ϑondăă) in the usual form, a round disk of bone or fired clay, serves for making thread. It bears in its pierced center a palmwood stick about a foot long, provided on the lower end with a sharply /22/ offset knob. The stick is set in motion by stroking
[532] it on the hip in a turning motion. One of the clay whorls here is spherically decorated with four human faces carved around it (Fig. 7 /see p. 42/).

286 The loom, or rather plaiting apparatus, on which the sleeping nets are made, is as simple as possible. Two strong wooden poles are rammed into the ground at a distance of 2-2 1/2 meters. The central roof-supports of the hut can serve as such. The warp

/30/

852 The wound holes are kept open with cotton threads passed
304 through them and changed often. The patient must fast for one day and is permitted to take only liquid nourishment for some time. The whole post-operative treatment is handled by an older woman experienced at it.

852 From now on the boys wear the T-shaped lip ornaments
301 of mother-of-pearl, not until later the piuva wood plugs. On
291 this occasion the bast apron of the women is put on the girls.

881 With the onset of puberty the young people of both sexes
304 receive the tribal tattooing amid similar ceremonies. The out-
[824] line of a circle is marked on both cheeks with a stamp made
[752] out of a piece of gourd (tešiă). Then the place is cut out with a small sharp stone, and cotton lint is put in the wound. After stopping the bleeding, genipa juice rubbed in causes the blue color of the scar.

881 The first appearance of the period is not celebrated with special ceremonies. The menstruating woman is considered unclean and must live apart from the others during this time. She is not permitted to bathe, but is washed by other women from a gourd bowl especially intended for this purpose.

857 Games and dancing. At an early age the children imitate the activities of adults. The boys practice archery and fishing; the girls give their mothers a hand in the household as soon as
524 possible. The clay figures have already been mentioned as children's toys. There are also small tops (kotauă, Fig. 15 /see p. 61/), canoes and oars, cooking dishes, etc. represented in the collection.

Games popular with the adults as well are the feather ball made of corncobs with ring-shaped inset, and furthermore the "game of cats cradle" /cited in English/ common in North America, as is well known, and recently described by Boas for the Eskimo. Strings drawn from hand to hand through the fingers represent certain animal figures by changing their arrangement. /Fig. 15 appears here./

/32 cont./

754 Since every sickness is considered the work of hostile sorcerers
755 or demons, they rely more on the counter magic of their own "medicine man" who removes the poison by sucking on the ailing part of the body or scares off the evil spirits by means of the magic rattle.

757 One of the most popular medicines of the Karaya is the resin of the almecega (Hedwigia balsamifera), which, stirred in with coconut oil, is used as a smelling essence for headaches and externally for abdominal pain (andžiura).

752 The savages have more knowledge of surgery. They know how to let blood out of the forehead vein, to stop bleeding by applying a tourniquet to the wounded limb, quite rationally sprinkle powdered charcoal on wounds, put splints on broken limbs, and develop great skill in removing thorns with sharp fish-teeth.

757 The custom of emptying the stomach in the morning by artificially induced vomiting, known in North America and Ecuador, is also found here. It is done with charred pieces of taquara (idžiua), which are introduced into the throat until the effect is achieved.

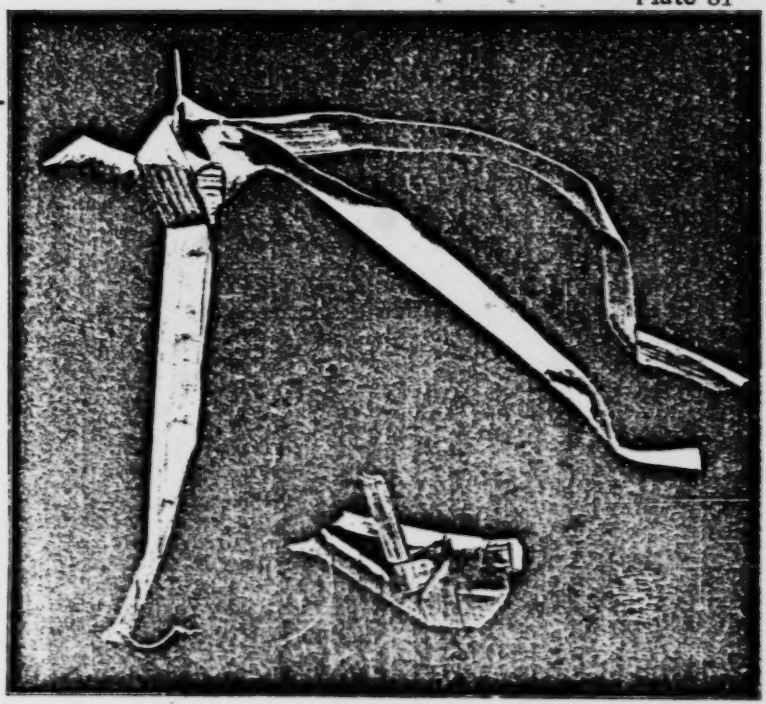
304 824 237 751 The most important medical instrument is the scarification apparatus (i-šaura). It consists of a little triangular or rectangular piece of gourd, one surface of which is weighted with a layer of wax or resin one centimeter thick, while the other bears a row of small sharp fish-teeth (Fig. 17).

Fig. 17. Scarification instrument (1/2).

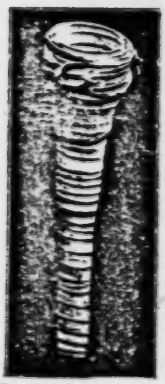
304 757 These scarifiers are stored in pairs, the convex scratching surface of the one resting on the concave one of the other. The small teeth are protected by stuffing cotton between them.

Plate 31

824
532



1a. Bird. 1b. Bird.

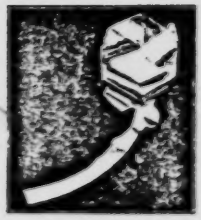


2. Tobacco pipe.

3

4

3. Honeycomb.
4. Puzzle figure.



5. Honeycomb.

6. Lip plug.

Leaf plaiting.

/Pl. 31 faces p. 140./

/199 cont./

417 Outside the houses, on the other hand, there are special storage racks (ŏdēdŭ). They consist of four forked sticks about one and a quarter meters high, which are set up in the form of a square and joined together by two crossbeams and many longitudi-
[251] nal beams. On these racks lie supplies of all kinds, manioc roots, unused implements and weapons kept on hand, as well as raw materials of all kinds; hung on them are gourds and baskets full
[287] of maize and feathers; the bast aprons of the women are also often hung here to dry (Ill. 24).

[225] For drying the lines used to fish for turtles, special racks made of two long vertical poles joined at the top by a cross-pole are used. The line, hanging far down, is hung on this to dry (Ill. 25).

Ill. 23.
Arrow-stand in the house.

[824] /200/ Fresh gourds are stuck on sticks to dry; near each house one sees groups of such staked gourds. Later, they are preferably stored by tying a whole number together on a stake (Ill. 26a and b).

354 Other household equipment is lacking. The hearth is outside
184 the house, in contrast to the Šavajé, among whom it is located in the round structures (see "Food" /see pp. 165 ff./); it was only in the modified houses in Schischá at the end of October that cooking was also done in the house. /Ills. 24 and 25 appear here./

364 House and environs are not very clean; food remains such as fish bones, nut shells, and bones, as well as wood, tools, etc., lie about everywhere. While it is dangerous just to come near the
[136] villages and houses with bare feet, the vast number of flies and other insects that gather in masses on the refuse is an obstacle to remaining outside the houses.

/200 cont./

000 136 361 to remaining outside the houses. In addition, there are the sand flies, /Ill. 26 appears here/ which, according to Ehrenreich, become so rampant that the Indians are forced to change their place of residence often (see below under "Village" /see p. 85 /).

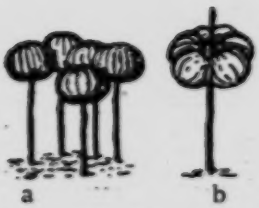
417

[225] →

Ill. 24.
Storage rack. Drawn from a photograph.

Ill. 25.
Rack for drying the turtle fishlines.

[824]



Ill. 26.
a) Drying gourds.
b) Storing gourds.

514 There are no privies. To attend to their needs, the Indians go to a depression in the sandbank, behind the nearest bush, or into the woods. To clean themselves they use three small sticks which they break from [136] a bush and then place parallel over the excrement. The urubus, which live in great numbers near the settlements, quickly take care of cleaning the place. In order to piss the men go to the river. Here they go into

/201 cont./

342 The chief's house is a communal structure. It is built by all
496 the married men, while the activity of the young people is limited
437 to cutting out and tying together the leaves for the roofing. The chief pays for this with arrows, lances, and clubs.

342 Besides these houses there are lighter protective walls (1),

1. Fonseca already mentioned these protective walls in 1773: The tents consist of two mats, one of which serves as a rug, the other as protection from the sun. Rev. trim. 8, p. 378.

a type of wind screen, in the shade of which the family usually remains during the day, and where the cooking is done. On journeys they serve as the sole dwelling, and in the village as drying racks for the aprons of the women.

There are various kinds of such protective walls.

[824] 1. Walls: Walls of palm leaves are fastened to several vertical poles in the same way as for the house covering (nõbŏ), or mats are tied to them, forming a vertical wall (bũlẽ̆). Such walls are encountered in almost all the houses, and they are usually fastened to three poles; also, however, walls of this kind which are twice as [252] long occur. In their /202/ shade is usually found the hearth for cooking, and in front of them lie mats on which the family remains during the day (Pl. 12, Ill. 1; Pl. 41, Ill. 1).

2. Roofs (wãdõ̆): They are horizontally fastened to several poles put at the edge, usually to four, sometimes to three or six poles. Only mats are used here, and they are tied on with ropes. The mats usually fall down to the ground on the sunny side. Sometimes a protective roof of this kind is also built at one end of a mat wall (Pl. 41, Ill. 1; Pl. 10, Ill. 1). /Ills. 27 and 28 appear here./

361 The village (ĩzõ̆).

Ehrenreich says that the houses of the Carayahi usually consist of mat walls and stand in wild confusion, without any order. Only the Šambioá were said to have a street-like arrangement of the houses. This arrangement in rows that run parallel to the shore is also present

/203 cont./

22 | in their dryness and cleanliness, are ideal dwelling sites. In the
361 | course of the dry season and within a certain area, they migrate from sandbank to sandbank as each of them becomes exposed by the river, so that in this way they always have fresh, unspoiled, clean dwelling-sites. With the beginning of the rainy season the villages are moved back again to the higher initial sandbanks and finally to the high banks of the river (2).

2. This explains the many abandoned villages that one comes across everywhere.

/204/ These rainy-season villages, lying up on the campo, are often far from the river; in the case of the north horde, they lie in part in mountains and are therefore difficult to find. This and the practice that several dry-season villages live together in a campo village probably explain the small number of Karajá villages mentioned by Coudreau.

361 / 356 If the villages are permanently abandoned, the houses, the poles of the mat walls and storage racks, the roasting grates, hearths, etc. are left standing; they very quickly disintegrate. Villages abandoned for a short time (for example, during trading expeditions) are made secure by closing the entrances of the houses with leaf walls. All the household equipment, such as pots, baskets, etc., is piled up at the sides and covered with large mats. In front of the houses, manioc stalks, tied in bundles of five or six pieces, are usually planted in the sand. Palm fronds are stuck into the ground all around for protection, and the whole is then tied together. For the rest, wild disorder prevails in such abandoned villages. Large pots lie about upside down, often protecting smaller ones underneath. Mortars, gourd vessels, and scraps of baskets lie about here and there, and everywhere there are large heaps of manioc remains, nut shells, turtle shells, and finally urucú fruits, without which no journey can be undertaken (see greeting painting /see pp.100 -104/).

[824]

/205 cont./

291 383 Clothing of the women. In contrast to the male sex, the female one is clothed from youth onward, and, to be sure, in childhood with belts of black cotton (wădakána). The older the girl becomes, the tighter and stronger the belt that is worn. The smallest children wear only a couple of black strings wrapped around horizontally, which are joined by a cross-thread, and the ends of which are knotted in front so that /206/ the fringes hang down in a small bundle (Ill. 29). Smaller girls from two to five years old wear loosely interlaced belts likewise tied in front. [284] The horizontal threads of the plaiting are knotted looplike at the ends, and into this loop are tied other cotton threads which serve to tie the belt together and at the same time form the bundle of fringe /Ills. 33-36 appear here/ /207/ (Ill. 30; Pl. 11, Ill. 4). Older girls from about five to ten years old already wear more tightly plaited belts, on which separate tie strands are likewise knotted in the loops; but from these strands separate bunches of fringe hang down (Ill. 31). From then until puberty the girls wear tightly and strongly plaited cotton belts. The tie strands are drawn through the two loops, but bear no fringe. [287] Instead, a gray tree-bast apron is drawn through the belt, which hangs down in front, is pulled between the legs, and is again fastened to the belt in the back (Pl. 18; Pl. 51, Ill. 2).

291 287 [824] With the onset of maturity, the female sex dons bands made of the bast of the gameleira. There are three kinds of such bands:

1. of red bast from a long-leafed tree (ămbūŏdă),
2. of reddish bast (ăndāhūlĕ or ĭnaùdŭ),
3. of white bast, from a round-leaved tree (hĭdēūlĕ), the Apeiba jangada, according to Ehrenreich.

These bands are made in the following way: with an edged stone the men cut the outer bark from pieces of trees hewed to the desired length. Later the bast is slit open lengthwise, peeled off, and soaked. Then it is folded together by the women, laid on an inverted mortar, and pounded with a flat rubble stone or an old stone ax.

[TEXT Continues on P. 92]

/207 cont./

291 The bands are worn in the following manner: one end is held against the small of the back, then the band is wound around the body and the long end is twisted with the short end: in this way the belt is secured. The long end is drawn between the legs and twisted into a roll and is then drawn in its full width from below through the belt in front and falls down over it in front. This end is now worn either hanging down to the knee or to the ground, or else it is again drawn between the legs, this time, however, in its full width, and is pulled up in back, a procedure which is used particularly when the women wish to sit down (Pl. 12, Ill. 4; Pl. 16; 17; 42).

292 Besides this clothing worn constantly, there are a few articles of clothing worn only temporarily for special purposes. These are the following:

293 The eye-shade (õ(õ)dĭ, õdjĭ). It is worn only by the male sex.
[287] The original form of this protection is probably to be seen in the bast band (Ill. 32) which the Indians sometimes wrapped around their hair (in cases of death, in sickness). The true eye-shade
● [824] consists of an oaguassu /babassu/ palm leaf, the pinnae of which are plaited together. In the simplest form, the ends of these
292 pinnae jut out free at the top (Ills. 33 and 34). This eye-shade
293 has passed through a development up to the complete hat: the
285 upper pinnae ends are likewise plaited, and to be sure, into a cylinder open at the top (Ill. 35). Among the Sambioá, Ehrenreich observed such a cylindrical hat (tašã), which was already /208/ closed at the top by plaiting (Berlin 3904). This final form was not represented among the Karajá; on the other hand, they had two other forms: first, a ring-shaped, wide-brimmed eye-shade plaited out of bast, with a stiff brim and a chin cord (Ill. 36), and then regular hats of plaited bast strips which are sewed together spirally (Pl. 43, Ill. 3). The method of plaiting these
[1007] strips is purely Indian, but the shape of the hats probably goes back to Brazilian influence, as the name (šãpẽo, Braz. chapeo)
292 shows. These eye-shades and hats are worn as a protection from
293 the sun and only by married men; I only rarely saw any, however.

/211 cont./

visit, the chief's wife combs and oils their hair.

412 303 The combs (zīhŏ) consist of flat, sharpened splinters of palm wood, more rarely of taquara, which, with the flat sides laid on one another, are held together by two pairs of little sticks, one of which is fastened at the upper edge and the other at one-third of the height from the points. These splinters are interlaced with cotton threads in patterns. On either side two or three splinters project a bit above the upper edge. These extensions often bear bunches of feathers or red-colored cotton tassels and are usually connected with one another by a suspension thread. On the outer

415 531

Ill. 39 a, b.
Gourd vessels for hair oil.

412 303 side of these lateral splinters, between the two cross-sticks, several intersecting threads are often stretched. The combs are always one-sided; only in the village on the Tapirapé mouth did I acquire a double-sided comb (Pl. 21, Ill. 1e). The shapes of the combs may be traced back to three basic types: a simple rectangular comb, wide combs with small curved lateral rods and converging teeth, and finally trapeze-shaped combs (Pl. 21, Ill. 1 a-d).

303 824 415 531 The hair oil (tālī) is made from the seeds of palm fruits. The fruits of the coceiro (āhădĕtĕ), as well as of the tucum palm (hālŭ), were mentioned. The oil is stored in special whole gourd-vessels (tālĭlŭkŭ), which are usually decorated with large designs made by peeling off the upper layer of the gourd rind (Ill. 39 a, b). Tufts of raw cotton are tossed into these oil-filled gourd vessels and now become saturated with oil. They

/212 cont./

386 824 The red color is obtained from the seeds of the fruit of the urucú bush. There are many different varieties, which produce a more or less intense red color, in part also inclining to yellow. Treasured above all is the kind with round seeds (wōlĕlŏ̀nì), whereas the kind with long seeds is not esteemed very highly (wōlĕnò). The kind with round seeds grows particularly in the [438] region north of the Tapirapé mouth; it is obtained here in large quantities by the Indians and further traded to the Indians south of the Tapirapé mouth, especially to those of the south horde. The 386 dyestuff is produced from the seeds in the following manner. The many small seeds contained in the beechnut-like fruits are removed, some palm oil is put in the hands, and then the seeds are rubbed between the oiled hands until all the dyestuff on the shells of the seeds has come off. In this way an oil color is produced, which is scraped off the hand with a knife or stick and is put in a gourd vessel. The rubbed seeds are thrown away. In this fresh state the oil color is immediately ready for use. For [438] trading, it is boiled in oil (thickened), then put into solid forms, and dried in the sun (Ill. 40 a, b).

[824] For the black color either soot, which is scraped from the charred trees of the plantings or from the cooking pots, or the blue-black juice of the genipap fruit [b(ă)dēnà] is used. This juice is mixed in small spoon-like gourd vessels or in larger, carved half-gourds /Pls. 43 and 44 appear here/ /213/ (Ill. 41 a, b); at first it is light, but soon after it is applied to the skin, under the influence of the air, it becomes a handsome black-blue color.

A white earth (mănāŭlà) is used as a white color. I never 302 observed white body /Ills. 40 and 41 appear here/ painting, to be sure. The small clay dolls, however, bear white patterning, and the Indians told me that with this color they paint rings around their arms, as well as transverse stripes on their chests.

302 413 The fingers serve as paint brushes, the flat hand for full body painting. /Ill. 42 appears here./ I never observed sticks or rags for applying the colors. On the other hand, for the genipap patterning a stamp (ūlĭnŏ) consisting of two sticks of cane lashed together, the cut surfaces of which are cut to form two semicircles, is popularly used. These semicircles are now placed together to form

[Text Continues on P. 103]

/219 cont./

304 881 the two circles drawn with black color on small children. In the case of boys, the time is determined according to when, after the last cropping, the hair reaches down to the tip of the nose in front and to the shoulders in back.

304 463 The tattooing is done by special persons who own stamps and stone knives and are called wairădŭ. There was only one such person in the south horde (in Village 6), whereas in the north horde there were several (for example, Ilk in Village 13). They are paid for this operation. No ceremonies of any kind are said to take place, and the children are not always tattooed together, but also singly on occasion, whenever one happens to be able to get hold of the master.

304 [629] The chief's tattooing, which is characteristic of chiefs and their wives, consists of vertical black strokes between the lower lip and the lower edge of the face, which are arranged side by side in one or sometimes also in two lines, one above the other (Ill. 53 a, b). According to Kuriŝr, this tattooing is supposed to be peculiar to women. Even girls are said to have such lines of blue dots on the chin, which is supposed to be regarded as very beautiful. I never observed this last phenomenon, however.

515 /220/ e) Body care. The Indians bathe a great deal; usually they take a bath early in the morning, and even during the day they plunge into the water whenever they feel like it, in most cases probably to cool off by means of the subsequent evaporation of the water in drying.

515 824 388 Two plant products serve as soap in washing; first, a bark (ŭăbăkă = sabão do matto), from which one scrapes off a little, /Ills. 54-57 appear here/, rubs this in water, and washes himself with the lather thus produced; then there is a tree bast (dŏŭ) which is also used as soap for cleansing.

307 824 The rubbing of the body, the arms, and especially the hair with the fragrant resin (ăndilă) of the almecegeira (Hedwigia balsamifera), which is ordinarily stored in gourds, is very popular.

/221 cont./

*301 taper to a point at the bottom, and at the top have a wider end which rests against the inner side of the lower lip as a support [237] (Ill. 54 a, b). Bigger boys use plugs made of mussel shell (ĭdjĕ́). The mussel used for this is the thin, two-pointed mussel (Pl. 45, Ill. 1c), which was called ĭdjĕ́ /Ill. 59 appears here/ or k(ă)dālắ. Also, according to Pedro, lip plugs called djälāpŭ́ are made from the thick, triangular mussel (bŭlŭ́, Pl. 45, Ill. 1a). He maintained that I had such plugs in my collection; /222/ the name was never given to me otherwise, however. Apparently a number of shell plugs are actually made out of this mussel. The plugs made out of the two-pointed shell have a mother-of-pearl sheen, are flat and narrow, rod or wedge-shaped, and usually have a wide

Ill. 60 a-d.
Wooden lip-plugs of the men.

support (Ill. 55 a-e). Plugs made out of the triangular shell on the other hand, have a white sheen and are thick, and usually taper down to a curved point or exhibit curved forms (Ill. 56 a-c; see also Pl. 12, Ill. 2).

Boys at an age just before puberty sometimes wear spirally rolled plugs made out of narrow strips of wood (ŏdŭhŏ́, Ill. 57).

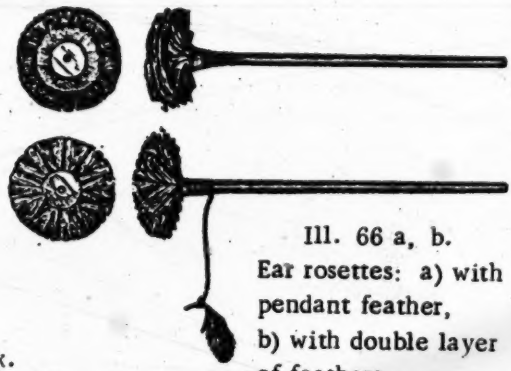
[881] With the incising of the tribal tattooing the youths change
•[824] over to lip plugs of wood (ŏdŭhŏ́) (according to Ehrenreich, made out of the light wood of the piuva tree). At first they like to wear huge wooden lamellae. The largest specimen of my collection is 25 centimeters long by two centimeters wide (Ill. 58a); such lip plugs reach down to the chest (Pl. 43, Ill. 1). At the lower transverse edge these lamellae usually run out to a small point. The older people become, the shorter the plugs they wear; the

/225 cont./

*301 [237] The rosette consists either of small fine red feathers or of two layers of yellow and red clipped parrot feathers, of which the outer layer is yellow and the inner layer red, or the opposite. These ear rosettes also occasionally have a small pendant feather.

Young people, as well as adults of both sexes, wear essentially simpler ornaments, namely, simple rods (dŏhŏ), which are often covered on the front part with incised decorations (Ill. 67). Here,

Ill. 65.
Decorated gourd disk.



Ill. 66 a, b.
Ear rosettes: a) with pendant feather, b) with double layer of feathers.

Ill. 67.
Carved ear-rod.

[824] too, we find differences according to age. There are three kinds of such rods: yellow, mostly carved taquara rods, reddish or brown cane rods from a variety of gibate, /226/ and black, undecorated rods [822] of gibate (dŏhŏdebè = black rods). The unmarried youth generally wears rods of yellow taquara cane and sometimes such of red or brown cane, while married persons, besides rarely occurring yellow rods, generally wear only black rods. Maidens and older bachelors, however, also wear such black rods. Moreover, young people prefer long rods, while old people wear only short ones (Pl. 42, Ill. 1; 43, Ill. 1; 44, Ill. 2).

/226 cont./

*301 In the case of the ankle bands the upper edge, in the case of the calf bands the lower edge, is somewhat wider than the other one. The small circumference of the calf and ankle bands is noteworthy. In the case of a 16-year-old girl the circumference of the calf band is 24 centimeters, that of the ankle band, 17 centimeters; in the case of a young man, that of the calf band, 29 centimeters.

*301 286 [602] Both bands are crocheted by women directly onto the leg of the wearer. The person concerned lies on a mat on the ground, the head put on /227/ a bundle; a rolled-up net covering is pushed under his knees. A woman related to him crochets the bands out of white cotton thread on each leg; only after they are finished are they colored red.

The bands are put on soon after birth. If they become too tight, they are cut and replaced by new ones. In the meantime people often walk around without the bands. To cut them off, they insert a small stick between the band and the leg, so as not to injure themselves with the knife, which, because of the strong, firm netting, must be pressed quite hard to cut through it.

Boys remove their ankle bands at an early age; girls wear them constantly until marriage, when the two sexes cut off each other's calf and ankle bands. Widowed persons put the calf bands on again.

*301 [554] [622] [824] Ornamentation as a sign of rank scarcely exists; at any rate I did not see anything of the sort. Kurišĭ, however, said that chiefs' wives wear a necklace of chains made of Thevetia fruits (mālăně). The chains are arranged vertically on two threads, which are tied at the back of the neck, in such a way that the chains increase in length in front and extend down the body to the navel.

C. Other Ornamentation.

All the other ornaments are limited to unmarried persons (children and young people) and are worn only occasionally.

Plate 48

*301
*237

1. Feather hoop.

2. Feather hoop with simple tuft.

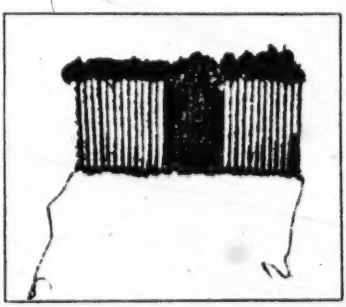
3. Feather hoop with composite tuft.

4. Head band of fine little feathers.

5. Feather diadem.

6. Head hoop with long vertical arara feathers.

● [824]



7. Stiff cane diadem.

/237 cont./

*301 This helmet belonged to a chief's son; it was worn with the ear pendants and necklaces shown on the same plate. The ear pendant consists of a tulip of colorful parrot feathers (kūă̆djŭ̆), from the stem of which two chains of whitish-red beads hang down, each of which bears at the end a Thevetia fruit, out of which shorter and longer little red feathers project. The necklace consists of four neck tassels (nʊ̆hʊ̆zą̆) of black cotton with snail shells strung on them. The two strings are not knotted, but run parallel to each other, and, in front on the part placed around the neck, they bear seven long pendulous chains of these same beads, at the ends of which similar fruits with little feathers are attached.

*301 *237 The feather crest of one girl is unique, and it likewise comes from the village on the Tapirapé mouth (Pl. 51, Ill. 1). The name given for it was dă̆dŭlă̆, a word that was perhaps misunderstood and should be tă̆bōlă̆ (wax), for the core of the whole is a lump of wax in the form of a huge bean with a flattened base. This lump is completely covered with little red feathers glued over it, and from its upper edge rise five long, red arara feathers. Around the center, concealed, run several black cotton strings which hang far down on both sides and are to be tied under the chin. The ornament is worn on the head with the longitudinal axis from front to back, similar to the Bavarian crest-helmet (Pl. 51, Ill. 2).

I did not notice any other head ornaments. Kurĭšĭ, to be sure, told me that they tie the red leaves of a plant around their heads as an ornament, but I myself did not observe this.

*301 824 Neck ornaments. As neck ornaments, chains of beads are now used for the most part. /238/ The older neck ornaments consisted of chains made with fruits of the Thevetia (mālănĭ; Pl. 51, Ill. 3a) and of such made with grayish-blue fruits (Pl. 51, Ill. 3b). These fruits are called ĭšĭŭlānĭ. The shrub on which they grow is supposedly planted in the plantings. Sometimes other, black fruits are also strung on the chains made of these fruits. Such fruit chains are worn mostly by women and children, especially by girls.

/238 cont./

*301 *237 lower arm (dĭdẽ̆sĭ) in back of the cuff, and, to be sure, by the youth of both sexes on special occasions.

Arm bands with bunches of feathers for the upper arm are reproduced in Ill. 1 a-c on Plate 52. The feather ornamentation consists either of rosettes with long little end feathers in them or of bunches of individual feathers, some of which look like claws.

In the case of the lower-arm bands with feather layers shown in Ill. 2 a-c on Plate 52, /239/ for 2a two layers of colored feathers are fastened one above the other to separate strings on the one flat side of the cotton strap placed edgewise, while for 2b on either side of the thick, twisted string feather layers are attached one on top of the other, of which the lower, longer layer consists of yellow, the upper shorter one of red clipped feathers. For 2c colorful parrot feathers in a wide layer are knotted to the twisted string by means of cotton knotting, and four Thevetia fruits hang down over this.

As pendants on simple string arm-bands either Thevetia fruits or small blackish fruits or snail shells or claws are used, to which feathers, feather rods, or bunches of cotton thread are usually attached. It is noteworthy that the pendants of snail shells and claws commonly appear in threes (Pl. 52, Ill. 3 a-f).

[824] I did not see strings joined together by little cross-sticks, with Thevetia fruits at the ends, as well as pendants of large red fruits, such as Ehrenreich brought back (Berlin 3729), and likewise none of the arm bands of ounce and wildcat skin with parrot or arara feather pendants (deoθanã̆) brought back by Ehrenreich, and no more than Ehrenreich the bands of bird bones arranged in parallel fashion that are contained in older Brazilian collections.

As finger rings (dãbõ̆ = hand, finger) narrow strips made out of the tail rings of lizards are worn, and, /Ill. 81 appears here/ to [825] be sure, by both sexes at all ages. They differentiate between two kinds: rings made out of the tail of the so-called chameleon (kũlã̆) with oblique scale edges, and rings from the teju lizard (wã̆dãlẽ̆) with vertical scale edges (Ill. 81). Both kinds occur almost equally often.

5: Krause--146 E-5 (1908) 1911 SP9 Caraja SP9

*301

Plate 51

1. Feather crest.

2. Manner of wearing the feather crest.

3. Neck chains: a) Thevetia fruits, b) išiulanï fruits.

/241 cont./

222 gathered at the beginning of October. Of other fruits Ehrenreich
262 mentions: caju /acajou/, jabuticaba, pitangu, and Bromeliaceae, and Königswald also the mangaba. I never saw these fruits in the villages, however. As vegetable plants there are eaten: mormão (dâd̃ēdă̄lī), which is gathered the end of October; on the other hand, the mandioca do matto (ā̆z̆ŏ) is supposedly not eaten, because it is too poisonous.

241 The following food plants are cultivated: the poisonous
262 (ă̆ndjĭūlă̄) and the sweet (ī(ĭ)l̆ŭ) manioc; four varieties of maize, mă̄ī, dōlĭmē with large, round kernels, ĭz̆ēlă̆l̆ă̄ with round kernels, mă̆īdūz̆ŏ with red kernels; batatas (kŏdĕrūtī), and cara (kāră̄). Of fruits, bananas are probably cultivated. The green banana is called jādâŭă̆bŏ, the ripe one jădàz̆ŏ. I obtained bananas in Indian villages only twice, and, indeed, at the beginning of July; I never saw any in the plantings. Perhaps bananas occur only here and there, for example, according /242/ to the statements of Brazilians, among the Šavajé on Bananal Island, which is supposed to have been named after them. I did not see oranges (nālă̆djă̄) anywhere. Of other fruits Königswald also lists: gourds, water-
● [824] melon, pineapple, and sugar cane (mā(ī)ĭtī). The gourd is not eaten, but used only for the making of vessels; the watermelon is generally gathered in the wild state, probably only rarely cultivated; only once in a village of the south horde, did I meet a family who stored seeds of these plants in small bast packets. Pineapple is surely not cultivated, and I did not see sugar cane either. If they had had any, they would probably not have begged
[114] me for sugar to the extent that they did. The statement of Ehrenreich that during the dry season sugar-cane shoots are planted on the sandbanks should be corrected to read manioc and maize stalks.

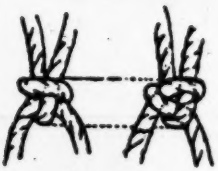
241 Of spice plants, peppers (kāšĭwēră̄), of plants for enjoyment, tobacco (kōtī), are cultivated.

Moreover, one finds in the plantings: as industrial plants, cotton and gourds; as plants used in ornamentation; ĭšĭŭlă̄ shrubs (for necklaces) and the urucú shrub; and a quantity of medicinal plants.

/250 cont./

[857] The way such anchored nets are set up is shown by the imitations with which children play (hãdẽkẽ). They are fastened to two long end rods; the net is stretched by means of several spaced sticks (Ill. 86). These stakes are driven down in front of the lake inlets, and by stretching the net on them the entrance to the lakes is blocked. From the boat the Indians beat the water and drive the thus frightened fish of the lake toward the entrance into the net, where they are then caught. (Such a device for catching piraruc͡ú is called dãõlãĩ̃; see piraruc͡ú net above.) Other nets (hãndṹṹ[ãĩ]) are allegedly set up along the sandbanks; the carí fish, which

[524]



Ill. 85.
Knot formation of the fish nets.

Ill. 86. Barrier fish-net. Child's toy.

[284]

swims against the sandbanks at night, is caught in them and taken out in the morning. I never saw nets of this type set up; probably the narrow nets are used for this.

The largest mass catches are made by poisoning the water of the lakes; but this is at the same time the worst plundering exploitation. The lakes are blocked off by fences (lĩklõ̃), which consist of driven piles to which palm leaves are fastened. The stems of the poisonous cipo (timbo: ãnzĩ̃) are placed on a forked stick and beaten soft with another stick, whereupon they are shaken out over the lake and a fine dust falls out. Then they are beaten a second time and shaken out. From the boat a second man stirs the water, which takes on a black coloring. The fish are stupefied by it

[824]

/251 cont./

252 The hearth lies outside the houses, usually in the shade of mat walls or near them. In the rainy season it is moved to the round structures of the houses. It is constructed in two ways: either three truncated cones, the tops of termite hills [ă(ũ)dŏ́, kĕdŏ́], are placed in a triangle in the sand, between which the fire is kindled (Plate 12, Ill. 1), or three broken pot bottoms (wădjĭwĭŭlă̆), which are set upended, are used instead. The large cooking pots are set on these supports. For roasting, low roasting hearths (kŏbĭŭdŏ́) of twigs are used: Four forked sticks are stuck into the ground in a square, two longitudinal sticks are laid between them and over these cross-sticks are laid. The fire, which is lighted underneath, gradually chars the sticks (Plate 61, Ill. 1, Šavajé; see also below, p.168). Roasting on a spit is also customary: a switch is cut from the bushes, tapered to a point, and, with several piranhas strung on it, is stuck obliquely into the sand so that the upper end with the fish is suspended over the fire. The fish are /252/ first roasted on one side, and later, by turning, also on the other side.

313 Dry wood is used for firewood (hẵă̆), as it is found in abundance everywhere on the sandbanks in trees washed ashore, as well as in the forest.

312 [824] Fire (hearth fire: hẵŏtĕ) is produced by twirling. Base and twirler may be of the same wood; usually ẵŭtĕ (Brazilian sarã̃o, the root of a goyaba /guava/ species) is used, but ă̆ndōlŏkŏ́ (Brazilian mŭ̆rĭzĭ̆) is also supposed to be usable (1). According to

1. The Brazilian names are given in the Indian pronunciation.

Ehrenreich (Berlin 3937), the drilling stick consists of taquara, the base of Bixa orellana. In the case of the /Ills. 87-89 appear here/ fire twirler reproduced in Ill. 87, the base shows three drilling holes; each hole is opened laterally by a notch so that air can enter. The twirler consists of a wooden rod, to the bottom of which is tied another stick of wood three centimeters long as the actual drilling piece. Tinder is not used; dry palm leaves serve for kindling the flame.

/257 cont./ Much is eaten, but The People do not become fat. While eating, they squat around the pot and spoon out their mush. I could not see that they ate turned away from one another, as Ehrenreich and Königswald state, but the women are usually ashamed to eat in the presence of strangers; and the Indians whom I had with me as companions did not eat my cooking when they came to a strange village

Ill. 100.
Flat ax.

Ill. 101.
Short flat-ax.

Ill. 102.
Stone ax with shaft groove.

with me, but went hungry the whole time, if in the village they did not have relatives who gave them something to eat. And they did not work during the stay in the village. They were ashamed, as they expressed it.

E. Beverages.

In drinking, the Indian is, understandably, very moderate; water serves as the ordinary beverage. Yet they also know how to prepare other drinks, which, however, are usually not intoxicating.

Buriti fruits (ãdehõ) are pounded and mixed with water; the liquid is allowed to settle, the clear liquid is ladled into a tall pot, boiled, allowed to cool, and then drunk. The liquid is said to be dark red and very sweet, but not intoxicating. On festive days large quantities of it are said to be consumed.

Pikĩ fruits are boiled, crushed, and, stirred with water, put into a pot. The liquid is left standing overnight and is drunk cold the next morning. The pits are dried and eaten later.

/259 cont./

249 438 [437] [482] Karajá who had bartered arrows there for tobacco seedlings; his basket-basket was fully loaded with the packets in which the plants were packed. The seedlings were well wrapped in leaves and bast into a large cylindrically shaped bundle that was reinforced all around with vertical bamboo rods and firmly laced.

276 They were most particularly mad for the heavy Goyaner /Goyana/ tobacco.

Smoking is done by old and young, men and women. Even babies are sometimes permitted to partake of this pleasure. Pipes are smoked throughout; maize-leaf cigarettes are not customary.

● [824]

Ill. 103.
Fruit of the jequitiba tree, out of which tobacco pipes are made.

Ill. 104 a-c.
Tobacco pipes made out of jequitiba fruit. a) Crude form. b) Carefully worked, without groove. c) Carefully worked, with groove.

[824] /260/ The pipe (in men's language, wălĭonă, wălĭkŏkŏ; in women's language, wălĭkŏkŏ) is made out of the fruit (ărĭkŏkŏ) of of the jequitiba tree (Hymenea sp.) (Ill. 103). The fruit, approximately seven centimeters long, is closed with a stopper. When it is ripe, the stopper falls out and the fruit kernels fall to the ground.

/267 cont./

411 [824] The shaft (b'dõlẽ) consists of taquara cane. This cane seems to occur south of the Rio Tapirapé only in the region of the south horde. At the southern end of Bananal Island I came across a village that was on the move southward in order to obtain taquara for their arrows near Leopoldina. The shaft is 0.8-1.0 centimeters thick on the average; its length fluctuates, depending on the type of point (see above). I never saw shaft decorations.

411 237 The feathering, on the average, is 17-22 centimeters long. Of all my arrows there are only two exceptions, one of which is 15 centimeters long, the other 31. The feathering is attached directly to the lower end of the shaft. Ehrenreich reports that the [114] feathered end is often set into the shaft separately. His assumption that in this case the arrows had been repaired /268/ is confirmed by a specimen in my collection which was thus restored (Ill. 119a).

[284] Great care is used in the construction of the feathering. It consists of two feathers standing opposite each other, the upper tips of which are held fast by the notch-lashing, and the inner [314] vanes of which are clipped short. At the place where the quills are supposed to be fastened, the shaft is rubbed with resin; the halved quill ends are pressed on it, whereupon the vanes are set vertically to the shaft and /Ills. 118 and 119 appear here/ are given a turn (an eighth to a quarter of the circumference of the [284] shaft) (Ill. 119b). Then the quill ends are tightly wound with [283] black cotton thread (ãsõdẽbẽ), whereupon the outer vanes are cut to shape (Ill. 119c). In former times, the feathers were given the desired shape by singeing, but since the introduction of iron shears they are cut. Not until the feathering is finished is the point inserted.

A different kind of feathering (spiral winding through the two halved /269/ /Ill. 120 appears here/ /270/ feathers) is found in the case of a few children's arrows of the north horde (see "Children's Toys" /see p. 241/). It is not yet certain whether this is an old feathering that has now become lost to adults.

/271 cont./

411 approximately 70 centimeters long, the second approximately 50
285 centimeters long.

Ehrenreich speaks of a second type of club: flat, shovel-like clubs that have a four-sided, prismatic blade with sharp edges and a lancet-shaped point. The handle is plaited all around, and at both ends of the plaiting cotton tassels hang down ("Beiträge," Pl. VI, Ill. 11). He obtained two such clubs from the Šambioá (Berlin 3980), whereas he saw a cruder form among the Karajá. The question is whether this club form belonged to the Karajá originally. For I came across such forms neither among the Karajá [171] nor among the Šavajé, but certainly among the Kayapó, /272/ among whom broad cutting-clubs seem to be indigenous. It may be that the Šambioá took over this form from the Kayapó. Only a small child's club of the Karajá (Ill. 125) shows a similar type (1),

1. Cf. also, however, the club stick above (Pl. 56, Ill. 3c).

but it comes from the village on the Tapirapé mouth, so that here, too, it is not certain whether an old, now extinct club form has been preserved in this child's toy or whether it is not more likely that there is influence from the Tapirapé or the Kayapó.

411 The lances (dõnõlĭ; Ill. 126) play a minor role. They are a weapon peculiar to the Karajá. Today they are probably used [224] only as a display weapon for festivities, visits, etc. In former [825] times they were put to use in hunting for jaguars: the bunches of feathers on the tip were supposed to make the animal fearful and uncertain, so that the Indian, at the most auspicious moment, /Ills. 123-126 appear here/ was able to deliver the death blow (according to the statements of the Indians). I never heard that they were ever used in war.

• [824] The shaft consists of heavy palm wood (aruera); it is almost always 240-260 centimeters long and about three centimeters thick; only two specimens of my collection are a little over 200 centimeters long.

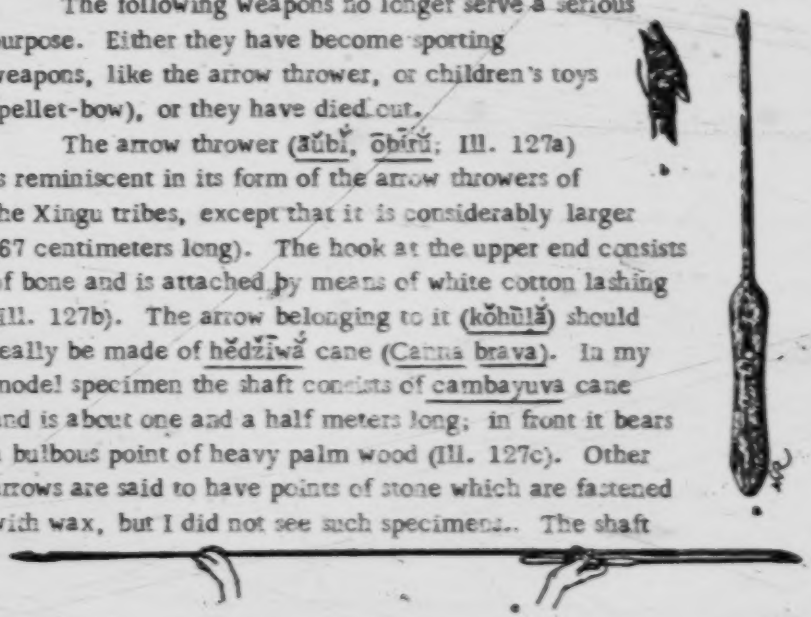
/273 cont./

411 [531] [285] Ehrenreich also says that this plaiting is decorated above and below with small feather wreaths; this is not the case among my specimens.

According to statements by the Indians, in olden times their spears did not have bone points, but rather ran out in front into the pointed shafts; otherwise they were equipped like the spears of today.

[118] The following weapons no longer serve a serious purpose. Either they have become sporting weapons, like the arrow thrower, or children's toys (pellet-bow), or they have died out.

The arrow thrower (ãũbĩ, õbĩrũ; Ill. 127a) is reminiscent in its form of the arrow throwers of the Xingu tribes, except that it is considerably larger (67 centimeters long). The hook at the upper end consists of bone and is attached by means of white cotton lashing (Ill. 127b). The arrow belonging to it (kõhũlã) should really be made of hẽdzĩwã cane (Canna brava). In my model specimen the shaft consists of cambayuva cane and is about one and a half meters long; in front it bears a bulbous point of heavy palm wood (Ill. 127c). Other arrows are said to have points of stone which are fastened with wax, but I did not see such specimens. The shaft



Ill. 127 a-c.

a) Arrow thrower, b) detail of the hook, c) handling the arrow-thrower.

is unfeathered; it has no notch. Ehrenreich's arrows of ubã cane, on the other hand, have at the end a cut-out section that contains the notch hole. The specimen of throwing stick and arrow reproduced here was made by the Indians at my request.

The manner of handling it is shown in Ill. 127c. The thrower is held in the right hand; the arrow, with the rear, hollow end hooked into the peg, is laid on the board and grasped here with the right hand as follows: the thumb lies on the right edge of the /274/ throwing board, the second finger is stuck into the hole of the handle, the third finger reaches from the left edge over the arrow, the fourth extends from the left edge under the arrow, in other

/276 cont./

501 The oars are about 130 centimeters long and have a blade 18-19 centimeters wide and about 70 centimeters long, which [531] terminates in an offset, elongated point. The blade is sometimes painted black; a center cross-band is left blank and painted red. The handle end has a short, curved /Pl. 57 appears here/ /277/ crutch. Below this on the handle there are three raised rings, which are produced by two notched grooves; they are characteristic of the Karajá (1) (Ill. 128 a, b).

1. See club handles above /see PP. 191-192/.

Ill. 128 a, b. Karajá oar.

The rudder is identical with the oar; it is likewise freely manipulated.

[824] Poles (hōdjŭ, wĭlŏtŏ, made of meijú wood) are about four to five meters long; they are cut out of slender, thin trees, under the white bark of which lies a red bast, which, freshly peeled, smells like cress. When the pole is not in use, it is stuck into a short loop which is drawn through the boat wall in front and floats alongside. The poling is done from the front end of the boat, whether the Indian moves the boat alone or has a helmsman with him. He sets the pole in, now on this side, now on that, depending on the direction of travel, then turns around, presses the end against his chest, and, going five or six paces to the middle of the boat, pushes again toward the middle. Then he goes back to the front and starts anew (Pl. 1).

This walking causes a violent rocking of the boat; the Indians are very skillful, however, so that no water pours in. If several Indians push with poles, they stand turned alternately to the right and left and move the poles from that position. When they pull forward, they set the poles so far from the boat that no water can enter.

Whereas rowing is practiced equally by men and women, I never saw women traveling with the poles.

[Text Continues on P. 202]

/281 cont./

824 Most of all, the Indian exploits the vegetable kingdom, and here he has also gone over to the cultivation of plants useful to him. He already has at his disposal, of course, many useful wild plants in the way of trees (leaf trees, palms), shrubs, varieties of cane, etc.

Almost all parts of the plants are utilized, in each case, of course, only certain ones: wood, bark, leaves, stem, bast, [241] blossom. Of plants whose fruits are used technically, the following are planted: /282/ gourds, cotton, urucú. The gluing ma- [314] terials, with the exception of wax, are taken exclusively from plant resins.

324 412 In the following, the processing and utilization of the individual raw materials will be described.

D. Stones are used above all as stone axes. The material for them is chiefly granular diabase or diorite. Nothing is known about how they are made. At the present time they serve only as striking stones for the preparation of bark cloth and for cracking nuts. Apparently they all come from the Rio Tapirapé, as well as from the mountains north of it, and are perhaps not even made by the Karajá themselves, but acquired from the Tapirapé through trade. In shape, there are flat axes and axes with a shaft groove (Ills. 100-102). As a nutcracker I found a stone apparatus consisting of stone base and small hammer, which, in shape, is quite peculiarly suited for this. Through long use a smooth, round hollow was produced in the slightly convex striking surface of the hammer (Ill. 99). Such stones are said to come from the cachoeira /cataract/ near St. Maria. The small stone knives which are used for tattooing are made anew each time out of the flint rubble of the sandbanks by splitting the flint with a stone or iron ax and using the sharpest splinters without any further treatment (Ill. 52b). Nothing is known about the making of the long stone lip plugs (Ill. 62). Allegedly they are struck into shape with [439] stones. The Karajá do not make them themselves, but barter for them with the Tapirapé.

/282 cont./

323 317 [469] E. Earths, besides being used as colors (see under "Coloring Substances" /see p. 240 /), are used only for making pottery, which is practiced by the women. The material used is the grayish-white clay (zõũ) that occurs in strata on the steep banks and, in conical shape, is stored in piles in the villages. For use it is first pulverized very fine and then mixed with a number of additions. The most important addition is mãũzĩ (Pl. 58, Ill. 1), a creation designated by the Brazilian-speaking Indians as the nest of the cupim d'agua, which is found in huge quantities as a covering of the roots and lower branches of the trees along the banks. One finds it piled up in great heaps near the villages. It is burned in the fire, then pounded, and, mixed with water, added to the pottery clay.

323 [824] Another addition is obtained from the purple blossom (ãdẽnã̃) of a tree; the blossoms are burned and their ashes mixed in with the clay. This statement by Pedro seems to correspond to the custom of making the clay more resistant by means of the flinty content of the ashes of certain creepers, as reported by Ehrenreich from C. de Magalhães ("Beiträge," p. 19).

The shaping of the vessels is done in the following manner: The bottom is shaped out of a flat cake, on which a low edge is simultaneously worked out. A potter's wheel is absent; an old pot-bottom or most often a rod-sieve, the structure of which is imprinted in the soft clay, serves as a base (Pl. 58, Ill. 2). Smaller vessels are shaped on the hand. /283/ The potter then mixes the gray clay with water, twirls it between the palms of her hands into a roll, places this on her left lower-arm, and, with the right index finger, presses a longitudinal groove into it (Ill. 129). The roll is now placed with the groove on the edge of the bottom piece and is then pressed flat toward the top (Ill. 130). It is so arranged that the roll corresponds exactly to the circumference of the vessel. Roll is placed upon roll in this manner and then smeared together with the hand or even with a smoothing stone, until the vessel is finished.

/285 cont./

237 two holes in the center are sewed on the belt of the long string-
321 skirts of the girls (Ill. 69), as well as on the cylinder-bands of the dance masks. As spoons and scrapers they use mother-of-pearl mussel shells, which are only slightly worked, but are usually used in the crude state.

287 Concerning the feather technique, see below in connection with the tying, knotting, and plaiting technique /see pp. 233 ff./.

824 The utilization of the vegetable kingdom is very extensive. The cane species are used remarkably little; apparently the region is poor in them.

G. The wood of trees is made into boats, poles, oars, mortars and pestles, stools, lances, bows, throwing boards, arrow points, manioc grating boards, lip plugs, comb teeth, etc. Soft or hard woods are used, depending on the purpose. I was not always able to learn which kinds of wood were used for the individual implements. Spears consist of so-called aruera wood, bows of hard palm wood, boat poles of long, slender trees with very light wood. Soft wood is used for stools, lip plugs, and manioc grating boards; all the other implements consist of hard wood. Of the cane species, taquara is used as arrow shafts, gibade and similar types as ear rods.

396 I am most fully informed about boatbuilding. The boats
[462] are built by the men. All of them understand this art, though
[937] many confine themselves to buying boats from others in exchange
[463] for an iron axe. /286/ Apparently certain persons make boats in larger numbers for the village and then sell them. Thus, a few hours downstream from Schischá I met two families from this village who had erected temporary huts for themselves here in the wilderness, in order to build boats in the vicinity. The making of a small boat is said to take four days, a larger one eight days. These time estimates, however, seem to me to be
[824] very low. The trunk of the lantim tree (Calophyllum: dāļiŏ) is used as material for the boats; Ehrenreich mentions pau d'arco and jatoba, Königswald also jatahy and others. The trees are felled in the forest and crudely worked; first the outer shape is hewed out with an ax and then the interior is likewise hollowed

/286 cont./

396 out with the ax. In this crude shape the boat is brought into the village and placed on two forked posts about half a meter high (Pl. 56, Ill. 5). With oaguassu palm fronds, which are laid in the hollow, the interior space is completely burned out and blackened, while at the same time burning through the walls is prevented by quickly snatching out the fire. Then, while the wood is still warm, about 20 cross-sticks, each approximately three centimeters thick, are stretched from wall to wall; palm fronds are propped against the boat all around and are lighted at four or five places on either side by one man each. After about five minutes the outside charring and blackening of the boat is completed. The struts remain in the boat until the next day; they are very bent. Afterwards the boat is put through an inspection, during which possible irregularities, especially of the bottom, which could cause disturbances in the balance, are removed with the ax. At the front, narrowly tapering end a hole is cut into the right wall, directly under the edge, for the loop into which the boat pole is stuck during the rowing or lying quietly on the bank. This hole is supposedly cut in with a sharp knife under the application of a wooden mallet.

415 I did not see wooden vessels. Ehrenreich brought back a
412 few: a round vessel hollowed out from a tree root, with a carry-
114 ing string (Berlin 3875) and two spoons, the handle of one of which terminates in a tucano head (3934, 3935). In the case of fire
[372] sticks, according to him, the drilling stick consists of taquara, the base of Bixa orellana.

415 Of larger fruits only gourds are used. They are carefully
[824] dried by being stuck on sticks that stand in the glaring sun and in the sand of the sandbanks. Later, tied together, they are hung on a vertical stick (Ill. 26 a, b). Hollowed out, they serve as oil containers, as hanging containers for white down feathers, with a bast stopper (Pl. 58, Ill. 3a) or wax seal (the hanging band is fastened with wooden wedges; Pl. 58, Ill. 3 b,c), halved paint bowls and eating dishes, smaller ones as spoons. The whole-
[531] gourd vessel and larger half-gourd vessels are usually decorated with incised ornamentation, the smaller half-gourds with Pyrography.

/286 cont./

pyrography. Of the other fruits, jequitiba is used for tobacco pipes, hollowed out and crudely carved on the outside (Ills. 103 and 104); Thevetia is used for necklaces or pendants on belts, etc. The latter usually bear a small /287/ bunch of feathers in the hollow. Other small, whitish fruits are bored and strung as chains. In Ehrenreich's collection there is a small bowl, made out of a timbo fruit, for storing the urucú color (Berlin 3876).

The bark of trees is made into women's aprons. Above all the bark of the gameleira is used, which furnishes the reddish aprons (ăndăhūlĕ). Other species (also gameleira?) furnish red materials (ămbūŏdă) or white shiny materials (hidēūlĕ). Ehrenreich, in addition, also mentions Apeiba jangada (Berlin 3696). The preparation is as follows: Thick branches of the trees concerned are hewed off in the required length (one and a half to two meters) and brought into the house. Here the men, with an angular stone, strike off the solid pieces of bark, slit the bark lengthwise, and peel it off. The further treatment is the task of the women: the pieces of bark are soaked, laid folded together on the manioc mortar turned upside down, and are now beaten with a flat stone, usually an old stone ax, until they are completely soft.

Ill. 134 a, b.
Embira: a) wound on a rod,
b) rolled up.

H. Bast is used in wide layers as an ornamental binding material and in fine strands as material for strings and for knotting mats.

As ornamental binding material, the bast of Malvaceae (embira: dõdĕ, etc.) is used above all. There are light red, red, and black varieties. It is kept in all widths: the finest (0.3 centimeters wide) is wound on rods (Ill. 134a), the wider (2.5-4 centimeters wide) is rolled up into stout rolls in such a way that the colored, shiny side is on the inside (Ill. 134b). They are used

/287 cont./

283 [531] for the ornamental winding on arrow shafts, spear shafts, implement handles, etc. A kind of black bast four centimeters wide (cūnă, āãwṹ) is used exclusively to decorate the edge of the pointed-oval baskets (Pl. 57, Ill. 7); it is colored with black loam.

[824] Finely split bast fibers of imbauva and buriti serve as material for ropemaking and mat-knotting. I do not know how the imbauva fiber is made. The buriti bast fibers (cedo de burity: lādĕhõwṹ) are obtained as follows: The not yet unfolded leaves of the buriti palm (so-called olhos de burity), which lie stacked up in heaps in the houses of the plaiters, are beaten against the floor several times with one end, until the stalk has split open sufficiently into many narrow longitudinal pieces. Of these longitudinal pieces the fine, soft inner bast (iṹ) is then separated from the coarser outer leaf-strips (lādĕhŏdĕhĕ). The latter are used as leaf strips in the manufacture of hats; the former are further prepared for twisting and knotting. The imbauva fibers (Pl. 58, Ill. 4a), as well as the buriti fibers (Pl. 58, Ill. 4b; /288/ Ill. 135), are stored in larger bundles that are made up of thin bunches (according to Ehrenreich, in plaited braids, Berlin 3996).

Cords are made out of these by twisting them between the thigh and the palm of the hand. Stouter cords are made out of two or more /Ills. 135 and 136 appear here/ such fine cords with the spindle. They are used as binding string of all kinds, such as bowstrings, as ropes for strong fish-nets, fishlines, etc.

286 Fine twisted bast strings are used to knot the feather-cap nets. The large fish nets are made in the same way as these nets; it is pure netting work. Implements are not used for this; I did not see any in use, and the Indians denied to me that they existed. In Ehrenreich's collection, however, there is the beginning of a net of fine bast threads (Berlin 3938) bearing two small wooden rods at the upper edge, which Ehrenreich is inclined to regard as knitting needles. The cap-nets are made as follows: Out of a string twisted on the thigh a loop is knotted and hung over the great toe of the sitting worker. A second thread is knotted to it, and with this the first /Ills. 137 and 138 appear here/ row of meshes

[Text continues on p. 218]

28 /289 cont./
462 nets is a task for the men, that of the mats a task for the women.
285 Usually several women work together on a mat; it is not difficult work, but the hard pulling and constant twisting of the weft threads (they are twisted only when they are plaited through) affects the fingers so much that deep, calloused ridges run across
[963] the finger tips of the plaiters. Apparently there are women in the villages who provide the entire village with mats; at least large supplies of them were found in certain houses, and to buy them I was sent into specific huts where mats were made.

[824] For the plaiting which is done by the men, strips of buriti
[962] bast and the leaf pinnae of the oaguassu palm are used. The
294 strips of buriti bast are used only in the making of hats. Appar-
[177] ently the method of making hats is copied from the neighboring Brazilians. At least the shape is the same; but whether all the types of plaited strips which are sewed together spirally into a hat correspond to Brazilian designs, or whether there are innovations here, I do not know. The most common design, consisting of four-part strips with a notched edge, seems to be Brazilian, the other two, the eleven-part strip with a smooth edge and the nine-part strip with a smooth, double edge, may be original forms in view of the plaiting skill of the Indians (Ill. 139 a-c). These strips are sewed together with fine bast threads and a bone needle four centimeters long (Ill. 140).

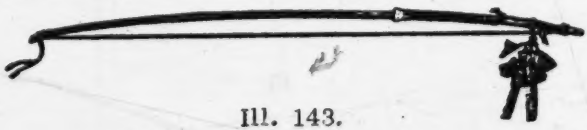
285 For all other plaiting the leaf pinnae of the oaguassu palm are used. The material for this is stored in the houses in large /290/ quantities, mostly lying on the floor under mats; in Schischá it also lay on special forked racks on the long sides and in the roundings of the houses.

In the same way as for the house covering, two oaguassu fronds are laid with the ribs one on top of the other in the making of walls, fans, and eye shades, except that in this case the individual pinnae /Ills. 139 and 140 appear here/ are then plaited together. See the beginning of a piece of plaiting in Ill. 5 on Plate 58 /see p. 219/.

/292 cont./

285 of the lid-half, is pulled through the outer oval of this half from below upward, forms a large carrying /293/ band over the lid, and on the other side leads down to the bottom rods in the same manner. If one wishes to open the basket, the lid-half slides up on the thread (Pl. 57, Ill. 16). At the same time, however, the thread also serves for closure during transport: on either side one makes a loop which is put over the ends of the rod of the lid-half and pulled tight (Ill. 142g).

Sieves and sieve-baskets are made entirely differently (wälilisi; Pl. 55, Ills. 2 and 3). They are made out of shavings of flexible creepers (according to Ehrenreich, arimbamba). The shavings run radially and are interwoven concentrically with similar switches (two each). On the bottom they cross in four groups. In Ehrenreich's specimens the plaiting is in part so tight (Berlin 3898) that the utensil is useless as a sieve. Such tight



Ill. 143.
Bow for picking apart the cotton.

baskets serve as containers for raw cotton in spinning.

Rod-sieves consist of fine rods placed parallel, which are bound together at considerable intervals with two strings (Pl. 55, Ill. 1).

I did not see among the Karajá the other kinds of baskets and bags mentioned by Ehrenreich: small palm-leaf baskets with rectangular bottom, square baskets, small bags with flap lids made of carandasinha palm fiber, bottle-shaped flexible baskets (moti), hanging baskets (Berlin 3879), and lid-baskets (Berlin 3900) made of flexible cipo plaiting.

I. Just as varied and skillful are the treatment and the utilization of cotton, which are incumbent on the women. Cotton is grown in the plantings; tending it is the duty of the woman. The harvested cotton is stored in baskets. Before it is spun, it is

/304 cont./

386 824 M. Coloring substances and adhesives. By way of coloring substances, besides urucú red (Bixa orellana) and genipap black (Genipa brasilensis), which are used essentially as body colors, only black and white occur as technical colors. The white earth (mănāŭlă = white stone) serves as white; it is pounded and used above all for painting the bow-wood winding. It is also used for making spinning whorls. Black loam (zŏŭblūlŭ) is used for black coloring. Embira is colored with it by heaping wet black loam over the bast and letting it lie this way for a night. Cotton is dipped in boiling water and then drawn through the loam standing nearby in a pot. This is repeated several times until the threads are sufficiently blackened. Cotton is colored red with urucú oil color only after the completion of the object concerned. Concerning the storing and the trade form of urucú red, see p. 100 and Ill. 40 /see p. 103/.

837 The universal adhesive substance is beeswax (tăbōlă) that is stored in spherical form and is offered to passing travelers in bulk as material for boat calking. Jatobá resin (kūwăŏ), a light, transparent, hard resin, is also used a great deal. From it the red, lacquer-like resin (daûmālĕ), such as is used to decorate the feathered end of the arrows, is made in the following manner: the resin is softened in a pot over the hearth fire, urucú color is poured in, the two are mixed, and the whole is allowed to stiffen. The black, lacquer-like resin (dŏwŏdālă), which serves the same purpose, seems to be made in a similar manner by adding black coloring. Both kinds are stored in large lumps which seldom have a definite shape. For fastening the mother-of-pearl eyes on the stools, the little down feathers on the bodies of children etc., a soft, yellow resin is used (kōōdĭ), which is stored in a piece of palm leaf folded together.

381 314

/309 cont./

cooking pots (Ill. 169e), shallow dishes with straight or curved sides (Ill. 169 f-h), three-legged pot (Ill. 169i). The divergent forms consist of oval bowls (Ill. 170a), small pots with a minimal opening (Ill. 170 b, c), the bottom of which sometimes comes to a point (Ill. 170d), vase-like pots (Ill. 170e), stemmed pots (Ill. 170f), goblets (Ill. 170g), bowls like flower baskets, with a three-part handle (Ill. 170h), and lamp-like bowls with two points at the upper edge (Ill. 170i).

524 415

These smallest vessels already bring us to the actual playthings.

Small boats (hãwŏlĭŏlĕ) with oars are floated by children especially the boys, in the pools on the edge of the sandbanks.

524

Ill. 171 a-d.
Child's toy boats.
a) Ordinary type, b) isolated form, c) halved gourd, d) palm-leaf sheath.

Their form differs from that of the large boats insofar as the rear part is cut off crosswise and does not taper to a long point. The boat in Ill. 171a represents the ordinary type, to which belong two painted oars and a clay doll (girl with long string apron and feather tuft). The boat in Ill. 171b shows a divergent type; it was carved by Kuriší, who had already been to Rio and São Paulo and spontaneously remarked that this form was the product of his own imagination. As a substitute for these imitations, halved gourd shells (ĭšã, Ill. 171c) or palm-leaf sheaths (ēlŭdãzĭ, Ill. 171d) are used and are pulled along by ropes in the sand; they were observed only in the village on the Tapirapé mouth. The small oars which belong

[824 184]

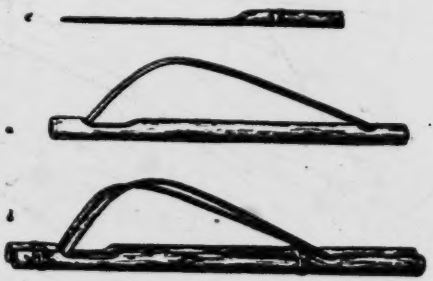
/311 cont./

524 small red and yellow feathers and small pieces of red wood, which make circular figures when spinning. The top is twirled between the palms of the hands in the air and then allowed to fall. It has achieved the desired speed of rotation only when it buzzes.

• [824] Humming tops (ĭnâuĭnắ) are also common. The body consists of a gourd that bears two lateral holes of different sizes opposite each other. The stem goes through from top to bottom and projects 14 1/2 centimeters at the bottom. It is fastened in the gourd with wax (Ill. 175). A string which bears a small

[501]

Ill. 172 a-d.
Child's toy oars (c and d painted).



Ill. 173 a-c.
Gun reproductions. Karajá.
a) Simple, b) double-barreled gun, c) instrument for cleaning the tube.

wooden handle at the end is used to wind it up. Apparently there is no ring or the like to make it possible to wind it up without injury /Ills. 174-176 appear here/ to the left hand. Koch-

[971] Grünberg in his book, Zwei Jahre unter den Indianern /Two Years Among the Indians/ (Berlin, 1910), Vol. 1, page 121, illustrates a humming top from the Rio Aiarý, which is quite similar and on which a plaited ring protects the hand. Perhaps the Karajá also

/312 cont./

524 a second person takes part by lifting them off, etc. Each of the figures has a special name; I was shown wind, stars, deer. In general, the string game is regarded as a very difficult game.

[824] [177] I did not see balls, but was told that they make themselves balls out of maize leaves (dōki). They maintain that they learned to make them from the Brazilians. I also did not see anywhere the feather balls made out of corncobs with a ring-shaped insert, which Ehrenreich mentions.

Finally, still to be mentioned is a puzzle game which is popularly practiced by youths and men. The problem is to make two interlocking cane sections out of one piece. What matters here is only the clever way of making it. A piece of cane /313/ approximately 15 centimeters long and half a centimeter wide is split lengthwise, the two sections cut out in the upper layer by means of parallel cuts, the inner substance is scraped out except for two knobs at the ends, and the plaything is finished (Ill. 177 a, b).

Sport and Physical Abilities.

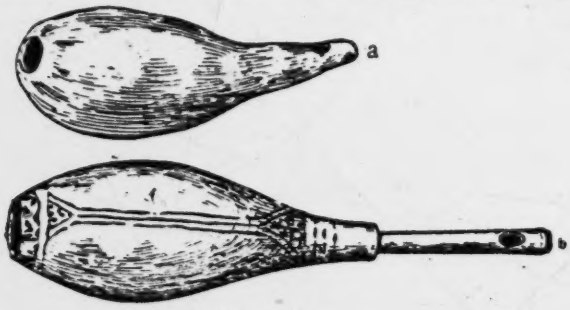
541 [177] As for animal fights, there are said to be cockfights, which, like the hens, they have taken over from the Brazilians. I did not see any; they were described to me as follows: children hide a hen under a mat; then they bring two roosters, one after the other, in order to provoke them.

526 Climbing is practiced a great deal. They are very adept at climbing tall trees; it is said that they sometimes tie a rope around both feet as a climbing loop.

Foot racing is very popular among the male youth; women and children, too, are said to participate in it. Apparently there are times when larger foot-race games are organized (rainy season). At other times the young people run for practice on the sandbank; the one in the lead often holds both arms stretched out sideways, in order not to let the other pass. Their resting position is peculiar: standing, they draw one leg up and place the sole of it against the inner side of the knee of the other (Pl. 30, Ill. 4).

/316 cont./

534 [824] The most common are taquara flutes with a gourd for resonance [(h)ă(n)djūlōnă]. The flutes consist of a taquara tube 44-46 centimeters long and about three and a half centimeters thick, one end of which is closed, the other open. Near the closed end is the lateral blow-hole. For resonance there is a gourd 33-38 centimeters long and 16-24 centimeters thick, which is open on both ends and into the large opening of which the flute is



[531]

Ill. 178 a, b.
Gourd trumpets.

[531] obliquely inserted. These resonating gourds are usually decorated with pyrography (Ill. 178b).

533 Hollow sounds which carry very far are drawn from these trumpets. Through alternating long and short tones, blown-in [574] and drawn-out tones, there are produced various tonal sequences, [202] which, on boat trips, are blown near the villages to announce arrival. An actual signal language, however, does not seem to 534 have been developed as yet. At present, ox-horn trumpets, such as the Brazilian deck-hands carry, are already finding entry.

I did not see other kinds of flutes, especially not the Pan-pipes of taquara mentioned by Ehrenreich.

[533] [824] In Village 8 I saw a small horn made of a gourd shell, which apparently is blown at the masked dances. It may not be blown in the presence of women, so I was unable to find out its use and the nature of its sound. Also I was unable to acquire the implement; I did not see it again anywhere else.

/316 cont./

534 [824] There are various kinds of whistles.

The gourd whistle (wŏlăwŭk, ădjūlōnă, lăkŭ) consists of a small, twin-bellied bottle-gourd 8.2 centimeters long, whose smaller belly is cut off crosswise (Ill. 179a). At this cross-cut surface the gourd is blown on from one side and then produces a shrill, high tone.

[824] Buriti-leaf whistles (ădjūlōnă) consist of a narrow buriti leaf strip which is rolled up spirally and then pressed flat. By means of a narrow bast-band wrapped around it the whistle rerains its shape. Such whistles are about three centimeters wide and one to two and a half centimeters high and sometimes have a middle reed, while in other specimens this is lacking (Ill. 179b). They are blown by sticking one end of the whistle flat into the mouth.

[237] /317/ The scraper from the shell of the kŏdŭ turtle (hūlihūlĭ) is made from the shell, eight centimeters long and three centimeters wide, in such a way that the tail end of the hollow is completely glued over with wax, while the neck peg of the ventral shell is surrounded by a thick layer of wax (Ill. 180a). One takes the shell in the right hand, places it with the wax peg inclined somewhat /Ills. 179-181 appear here/ obliquely against the tightly stretched palm of the left hand, and strokes the peg vigorously downward over the sweaty palm (Ill. 180b), by means [533] of which a squeaky, muffled sound is produced. According to statements by the Indians, the instrument is said to be used when boys come out of the forest. I did not succeed in finding out whether this is a reference to boys' training, initiation, etc. in the forest.

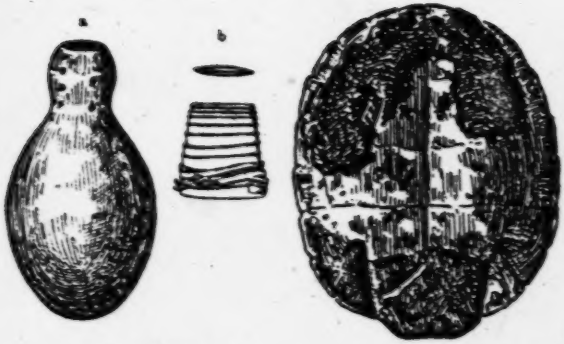
[533] Rattles serve as the sole instrument accompanying their songs. On all the rattles, the stem is led through the entire body of the rattle and /318/ is fastened at both ends with wax. It is kept plain and only rarely has plaiting around a bit of it. Its length below the body of the rattle varies between nine and 16 [237] centimeters. Monkey-skull rattles, for which monkey skulls seven centimeters long and four to five and a half centimeters wide are

[Text Continues on P. 260]

534

[824]

[237]



Ill. 179 a, b.
Whistles:
a) gourd, b) leaf.

Ill. 180 a, b.
Turtle-scraper and its manipulation.

[531]

Ill. 181a, b.
Gourd rattles.

/318 cont./

534 used, are very rare. I came across only two of these specimens
[237] (Pl. 58, Ill. 10 a, b). Otherwise gourds (ŭ̃ãlŭ̃) are commonly used
[824] as the bodies of rattles, which are usually 12-15.5 centimeters long and 5.5-13 centimeters thick (a small rattle is 6.5 centimeters
[531] long and 6 centimeters thick). Most of these gourd rattles are carved with the customary designs (1); many bear feather ornaments

[113] 1. See my article on "Die Kunst der Karajá-indianer," Bässler Archiv, Vol. II, No. 1.

on the stem end projecting out of the gourd at the top (Ill. 181 a, b). These rattles are swung rhythmically in the hand by the masked dancers.

533 Singing plays a considerably larger role. Only the men sing; it is only during the period of mourning that the women, like the men, intone monotonous songs of lament in a high pitch. The singing is one-part singing; mass singing seldom occurs. Only once did I hear a cappella singing. During dances two men simultaneously sing the same thing; otherwise they sing individually, especially when fishing. Apparently the Karajá are very musical;
[196] they sing gladly and well. Most of their songs are masked-dance songs, but it seems as though certain people invented and handed down specific songs. It was often said to me: this is the song of this boy or of that youth. Certain dances and songs seem to be transmitted through tradition only in certain families; others are quite familiar with them, but do not sing them. In 1908 Chief Ilk in Village 13 just below Izabel do Morro knew most of the songs. He was almost inexhaustible. The wŏrĭzŏ dance and song were handed down in his family. He knew not only Karajá songs, but also sang songs of the Šavajé and Tapirapé. He was known as a singer in all the villages, and everywhere people requested me to
126 play back the phonograms recorded with him. In all I recorded
533 phonographically 44 cylinders of songs. The Indians liked to sing
152 into the apparatus, as soon as the initial shyness had been overcome. To do this I used European music, which amazed them very much. They laughed aloud in astonishment, and many held

/336 cont./

I saw an umbilical hernia only once, in the case of a boy.

I did not learn anything about bloodletting, which Ehrenreich reports.

Scarification is very common; almost all Indians bear the scratch scars from it on upper arms and thighs. I was unable to observe anything about the procedure, which Ehrenreich ("Beiträge," p. 33) describes. Concerning the apparatus used for this, see above, page 109, Ill. 51.

Ill. 187.
Bone for cauterizing wounds.

Of illnesses for which the cure is not known to me, I saw a blind girl, a man blind in one eye, and a boy with dropsy, as well as a man whose legs were atrophied up to his knees and who was able to move forward only by crawling on hands and knees.

Ehrenreich reports ("Beiträge," page 32) that in the morning they induce vomiting by inserting a charred taquara rod into their throats, in order to empty the stomach in this way. He even brought back such sticks (Berlin 3964). I never observed this custom, but, as related above, simply heard that husbands induce vomiting artificially during the couvade (see page 273).

In the following I shall discuss the other illnesses insofar as I obtained information about them; I shall stress in particular observed cases of illness.

In case of snake bite the affected limb is tied up and some pounded dõãhĭ root is put on it.

There are very many remedies for indigestion and intestinal disorders. For indigestion three different roots are used. Either one pounds the mõnã́ root (in Brazilian allegedly murizí), mix

/336 cont./

757 it with water, and drink the liquid, or one takes, in the same
824 way, mixed with cold water, the pounded root of a cipo plant
[b(ŭ)dōilūlĕ́]. Finally, the root of a shrub which is cultivated for this purpose in the plantings is gnawed with the teeth in case of stomach pains. For intestinal disorders, two roots (dĭlŭàkŏzĕ́ and bēdĭ́) are /337/ crushed, each cooked separately, and the two decoctions mixed and drunk.

There are also several laxatives. The root ălăhĭnŏ (in Brazilian allegedly tĭŭ́) is pounded, cooked in water, and drunk as a purgative, or one uses the root of a vine (hămbūlādòè), which is pounded and extracted with cold water.

Jaundice and anemia in young people are cured by pounding the leaves of a red-blossomed creeper (dōwĭlĭzắ) growing on
261 the goyaba and rubbing the body with it. Jaundice is caused chiefly by the eating of clay, which is put into ball form. This eating of clay is probably to be traced to the lack of salt. Instead of clay, ashes and sand are also eaten, which are said to have a constipating effect. I often observed how the Indians ate the sand from the sandbanks by the handful.

In order to grow fat, they eat a certain small fruit.

757 In spite of the good teeth which the Indians enjoy, tooth-
[164] ache seems to occur more often than one is inclined to assume. Though I did not observe any cases, they have a whole number of remedies for it. For example, they use the sheath of pieces of root and twigs called kŭsĭ (in Brazilian the so-called para tudo),
[752] as well as a small fruit called sĭbūrĕ́. Teeth are not extracted; if they ache, this remedy is used. Otherwise they are left to drop out by themselves.

[164] I observed only one head cold (wādŏwĕ́), in the case of an older man. As a remedy he had wound a palm-leaf binding around his head. Apparently his head was very dizzy, for he held it in front and back with both hands.

164 I often observed coughs (wādŏ́); many Indians had a slight
757 cough, probably as a result of the cool nights. The children in Village 17 apparently had whooping cough; when coughing, they had choking spells, until they succeeded in coughing up the

/337 cont./

164 757 mucus. The mothers would pound them on the back; no other remedy was known. The coughing was explained as a consequence of the cold nights and the lack of blankets. They do not know any remedy for coughs.

164 I did not observe any tuberculosis. Ehrenreich reports ("Beiträge," p. 32) that the Karajá suffered from it, that they were aware of its danger and greeted every stranger with the question: "ahi catarrho não tem?" Now this custom has disappeared, probably with the decline of the disease.

[759] For chest pains they use ipipokama emetic powder (hãdãõ).

Fevers apparently are rare from May to October. At any rate, I did not see any attacks of fever in the villages. Only one of my Indian rowers was afflicted with a severe fever for three days in August. Fevers are said to be frequent, however, at the end of the rainy period, especially in the swamp region between São José and the Rio das Mortes; this stretch is therefore not 757 permanently occupied by the Indians. As a remedy they use the [824] /338/ plant kŏdūlāzĭ; it is pounded and mixed with hot water, and with this infusion the body, especially arms, shoulders, and chest, is washed. When this has been done four times in one day, the fever is said to be gone.

[164] Smallpox is unfailingly cured (as I was several times assured in answer to my question), and, indeed, the cure takes place on the eleventh day of the illness. It occurs as follows: [824] The four roots, nâũĕkĭedĭzũ, sĭndăkălăndõ, klāklă, lõlũõ, are pounded, mixed with water, and drunk. The drink is followed by profuse sweating. For eleven days this is taken three times a day, noon, afternoon, and evening, and during this time only very small, boiled fish are eaten. On the eleventh day the sickness is gone.

[164] Measles cannot be cured. In 1906/07 a severe measles epidemic must have afflicted the Karajá. Many people are supposed to have died because they bathed in the river during the fever. For this reason bathing is not permitted during any [262] illness now. Grilled piranhas and manioc mush serve as food for the sick; even the parents of the sick eat only these foods during the illness of their children.

/357 cont./

301 237 of blue-green feathers. The main course of feathers shows the following feathers in like sequences: pink heron and owl feathers, which alternate with each other, blue arara feathers (Pl. 60, Ill. 2), white jabiru /358/ feathers which, in the specimen from Schischá, are interrupted three times by two blue arara feathers. The little end feathers are yellow throughout.

I acquired two specimens of forehead feathers, which could perhaps belong to such feather wheels, but perhaps might also be worn standing up vertically, with the hoop placed around the face. In the case of one (waĩdõhẽ) the hoop is wound with a black cotton string; its ends are joined by a thin string. In front there are two feather tufts, each consisting of a rod with red feathers, which bears a yellow feather wreath on top, out of which project long dark green feathers. At the base, both rods are wound with white raw cotton (Pl. 59, Ill. 7). In the case of the other one (kõdsũlũkũãdsiõ) the hoop is set with white down feathers; the tuft consists of several red arara feathers up to 35 centimeters long, which below are surrounded with bushy small red and yellow feathers and below that are wound with raw cotton (Pl. 59, Ill. 6).

Fine little red feathers (wãlãĩ̃), little wing coverts of the roseate spoonbill, are fastened on a fine string and wound spindle-fashion on a rod. The string is many meters long. Ehrenreich brought back the same ornamental feathers from the Karajá. Allegedly they are used for head ornaments.

Of other ornaments there are:

[824] Necklaces of small, reddish-white fruits (ĩiũlãĩiãdĩ), which were very common, then feather arm-bands, some of which correspond to those of the Karajá. They bear either bunches of feathers at one place (Pl. 59, Ill. 8), or colorful layers of feathers on either side of a string (Pl. 59, Ill. 9).

Finger rings (dãbõ) are likewise made from the tail rings of lizards and chameleons.

6:Cook M-3,4 (ca. 1900) 1909
SP9 Caraja SP9

eyes from the strong reflection of the sun on the sand-bars. 293
When trading with travelers, they are eager to get blue or [439]
smoked glasses, or goggles.

The Karayá live in a more advanced state than do some 162
of the other tribes of the Amazon basin, especially the rough, 361
nomadic peoples, who exist in small groups of a few families.
They prefer to live in large groups containing hundreds of
individuals, and in permanent habitations, constituting fixed
villages or encampments. True, the Karayá living near San [721]
José, rove about somewhat in small parties during the dry
season; but farther down the Araguaya, the encampments
are more permanent and populous, numbering one hundred
fifty to two hundred souls. During the rainless season when 361
the river is low, they live on the sandy river bottoms, called
praias. Here they set up their easily portable huts, in order
to be convenient to their canoes and to the fishing grounds,
and also to be more free from troublesome insects.

The *villages* of the Karayáhy division, in common with
those of all other primitive peoples, are merely clusters or
groups of huts, huddled together in complete disorder. Each 342
hut is constructed by planting in the sand, fifteen or twenty
feet apart, two parallel rows of saplings, then bending over
each pair of opposites and tying them together. To these ribs
are bound bamboo rods in a horizontal position, *sipo*—creepers [283]
—being used as cordage; and upright poles are planted at the
gables. Over this frame-work is bound the skin, or covering, [324]
which consists of giant, feather-like palm-branches. Sometimes
plates, resting on forked posts, are used to further strengthen
the frame. This dwelling, when completed, is shaped like
the bottom of an inverted barge, and looks like a very squatty,
ancient haystack, with a hole—the door—eaten in one end
by cattle.

Garbage, such as watermelon rinds, pumpkin skins, green 364
corn cobs, and other fruit and vegetable refuse, is dumped
just outside the hut. Here, the mass festers and stinks in
the fierce rays of a tropical sun, and attracts swarms of [361]
insects, especially sand flies, that torment the nude savages

6:Cook M-3,4 (ca. 1900) 1909
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227 the genipapa or wine fruit, a very soggy, tough fruit as
227 large as a pear. It looks and tastes something like a fig soaked in vinegar, but is much prized by the natives. But, as elsewhere mentioned, the palm is the never-failing friend of the children of Nature. One or another of its multitudinous varieties will have a little food of some kind for them every day in the year, such as nuts, fruits and vegetables;
[824] and besides, will furnish them the material for their huts, and for bows, arrows and cordage. Though all else should fail, these trees will remain as a tree of life to them. It seems strange that they have no oranges. This fruit will flourish in this region, even doing well without any care, once it has been given a good start. The absence of this tree is the more remarkable because the Karayá are very fond of oranges, and undertake journeys lasting weeks to obtain them. Wild honey is also a much prized article of food, as it is among
[237] most South American savages. They make the wax into black balls, or discs about one inch thick, to be used as a glue.

276 The Karayá have also a kind of tobacco, which contains but a slight percentage of nicotine. The dried leaves are kept in large, square packages covered with palm-leaves. To prepare it for use, it is pulverized between the hands, then smoked in a pipe that looks like a funnel-shaped plug. The pipe most used is one fashioned by Nature herself. It is a certain kind of fruit-shell, or pod, which is funnel-shaped and hollow. Failing this, a pipe is made of a kind of hard wood. The bowl and stem are one straight piece; therefore, when in use, the cavity is in a horizontal position, and not held upright, like the civilized (?) man's flue. The part that enters the mouth is so large that the lips are greatly distended in closing around it, hereby increasing the already ugly appearance of the mouth caused by the repulsive ornament in the lower lip. I have seen the front teeth hollowed somewhat to fit around this huge plug.

252 No less interesting than the kind of food used by these people, is the means whereby it is prepared for eating. In

6:Cook M-3,4 (ca. 1900) 1909
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suited to their purpose owing to the many shallow places in the river, and because it facilitates landing and pushing off. The tree selected to be transformed into a canoe is an ipiúba or a jatóba, which must be very straight. Strange to say, the butt of the tree becomes the bow of the canoe; therefore, the finished canoe is broader at the bow than at the stern. As these children of Nature are preeminently imitators of Nature, it seems quite probable that in constructing their canoes, they have in mind the form of the fish, which always goes big end first.

The log is first hewn into the form of a canoe, then hollowed out with axes and with fire. It is not broadened amidships, therefore, when finished, it is no wider than was the original tree. As it is thus very narrow and tapers gradually and uniformly high above the water at both bow and stern, it tips over very easily. Great care is taken to make it perfectly smooth outside and in. No seats are provided, but sticks are placed across the bottom to keep both the occupants and the freight out of any water that may leak in. As every family has a canoe, quite a fleet of them may be seen in front of every village. These canoes are propelled by paddles five feet in length, half of which is blade, the point terminating like a lance. They are made with great care and labor, and are often nicely ornamented. When canoeing, the pilot is always seen perched in a squatting position on the extreme point of the stern with his knees drawn up to his chin.

The weapons of the Karayá are as of old—there has been no change whatever. In common with other Brazilian tribes, the length and stiffness of their bow is according to the height and strength of its owner. Some bows are seven feet in length, while a boy's bow is two and a half or three feet long. They are made of the wood of a certain palm-tree which the Brazilians call *pau de arco*—bow wood—which is the wood used by all the tribes of central and North Brazil for their bows. The bow is made flat inside, and the extremities taper to a point. Several lengths of string, carried

6:Cook M-3,4 (ca. 1900) 1909
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as a reserve, are kept wound around the bow. The Karayá take great pride in their bows, ornamenting them beautifully with tassels of brilliant feathers. 411 [531]

They use several different styles of arrows. Some are harpoon-like for fishing purposes; others are made with broad blades for hunting; while still others are for use in war. They are all made with the utmost care, as much as one or two days being consumed in the making of but one. Two or three different kinds of wood are always used in constructing a single arrow, one kind being for the spear, or lance part, another kind—heavy palm wood—for the middle staff, and light bamboo wood for the base, and all are spliced and bound together with the greatest nicety by means of long, narrow strips of bark taken from certain climbers, and finally, the weapon is burnished. It is about four feet in length. [461] [824] [284]

The weapons used for fighting at close quarters, which is the method of warfare liked best, are heavy clubs and lances. The clubs are of two kinds—first, shovel-like clubs and round clubs, resembling base-ball bats, varying in length from three to four and a half feet. The lances are nine or ten feet in length, the shaft being of palm wood, and the point, the shin-bone of the spotted *onca*—jaguar—or of a deer. A beautiful, basket-like work of black and white wooden strips is woven, or braided, tightly over the shaft of the spear, and to this is attached tassels of brilliant plumage. The Karayá have spear-throwing sticks, but I understand they are no longer used in war, but for sport only. The contrivance is a long strip of wood so formed that it can be used, sling-like to hurl a spear. In common with all the savage tribes of South America, the weapons, implements, ornaments and ceremonial instruments are all made by the men of the Karayá, while the women make only the household utensils. [726] [824] [237] [531] 462 171

The Karayá housewife, therefore, makes several styles of pots and pans; but pottery has not yet reached a very high degree of perfection with this tribe for the forms are simple and crude. They do not make pots in the form of natural objects as do the tribes of the Xingú river. Utility, and this 323

6:Cook M-3,4 (ca. 1900) 1909
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323 only, is sought. The Karayá once more like all the South American tribes, form the pots without the use of the potter's wheel, the work being done by building up rings of clay, stroking and shaping, first with the hands, then with bones and shells until the vessel reaches the desired form and strength. The ashes of certain plants are mixed with the clay to give it greater firmness.

To secure an oven in which to bake the pots, these children of Nature again look to their common Mother. In the large, dome-shaped ant-hills which abound in their world, they find a nearly complete natural oven. They further prepare this oven for use by carving a hole in one side and starting a fire in it. This done, they put the pot, previously sun-baked into the kiln; then open a second hole on another side of the ant-hill to communicate with the first, by which to feed the fire. A draft is secured by opening a vent in the top of the natural oven. The women make clay spoons as well as pots. Though a few of these clay vessels are provided with legs, none of them have handles, except as cords are secured around them to serve as handles.

415 824 Besides these manufactured vessels, Nature again comes to the aid of these primitive people and furnishes them jugs, bottles, basins and pans of a great variety of shapes and sizes from calabash or gourd-shells. These vegetable vessels are not only as hard as wood, but very durable, though they 534 cannot, of course, be placed over the fire. Large rattles for ceremonial purposes are also made from the gourd by re- 824 placing the seeds with pebbles, and attaching handles of wood.

285 Nature has supplied the Karayá with such a rich and varied material that braid-work is the principal household industry, a product notable for its utility and variety of form. The long, [824] slender leaves of the oaguasse, or burity-palm, are braided together diagonally into mats to serve as flooring for the huts, and even for roofing. The flooring mats, being so easily produced, are made only as wanted. The finest grades of matting are made to sleep upon and to roof the hut. For this work,

6:Cook M-3,4 (ca. 1900) 1909
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large, fan-like palm leaves are slit into narrow strips, skeins or bundles of which are kept always on hand ready for use. A very small mat is made especially for the fisherman to stand upon to protect his feet when he has to remain a long time at one spot on the hot sand.

A great variety of beautiful baskets are also made of braid-work. These are made of sipós—climbing vines—reeds, split stems and the like. Large baskets, resembling sacks, are made of very coarse palm-leaves for use in carrying heavy loads of food material gathered from the forest. The smaller baskets are made not only of fine materials of various colors, but are braided into nice patterns. They are of many sizes and shapes and used for numerous purposes. Some are hand or shoulder bags in which to carry small articles; many others of various sizes may be seen hanging from the roof of the hut which serve as receptacles for numerous small household articles or personal effects; others are double, or covered baskets, like telescope traveling bags, in which much-prized feather ornaments are carefully guarded; while still others are canoe-shaped hanging baskets, beautifully designed. Nearly all these baskets are flexible, and some are even elastic, bottle-shaped baskets. To carry the tobacco when on a journey, a square basket is used, to which is attached a bark shoulder strap. A large, basket-work disc, finely and closely braided, is used as a sieve, or colander. As the civilized Brazilians everywhere have the same kind of utensil, it may be inferred that it has come down to them from their aboriginal South American ancestors.

The "textile industry" of the Karayá is nothing more than braid-work. Natural resources once again furnish them an unlimited supply of material nearly ready for use. The burity-palm once more manifests its unfailing utility, yielding a splendid fibre which can be readily stripped from its long leaves. Another kind of fibre, which possesses great adhesive qualities, is obtained from the inner bark of the mallow tree. The finest threads are *spun* by rolling a number of single fibres together between the moistened hands, or

9:Gow-Smith T-5 (no date) 1925
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a cluster of feathers hanging below the point guides the spear unerringly when flung at its victim. The spear-shafts are beautifully decorated with a covering of black and white cane-work woven in intricate designs. No two of these woven handles are of the same pattern, but they all represent the various markings of snakes.

Fig. 97.—Cayapó head-dress

The bow and arrow are a favorite weapon with both the Cayapó and the Caraja. The bows, six feet long, are stoutly made of palm-wood, and are strung with the strong hand-spun cord of wild cotton, with the ends cunningly wrapped to the bow so that the string can be lengthened or mended according to the hunter's needs. Arrows are of wide variety and are used for many purposes, but all of them have long bamboo shafts